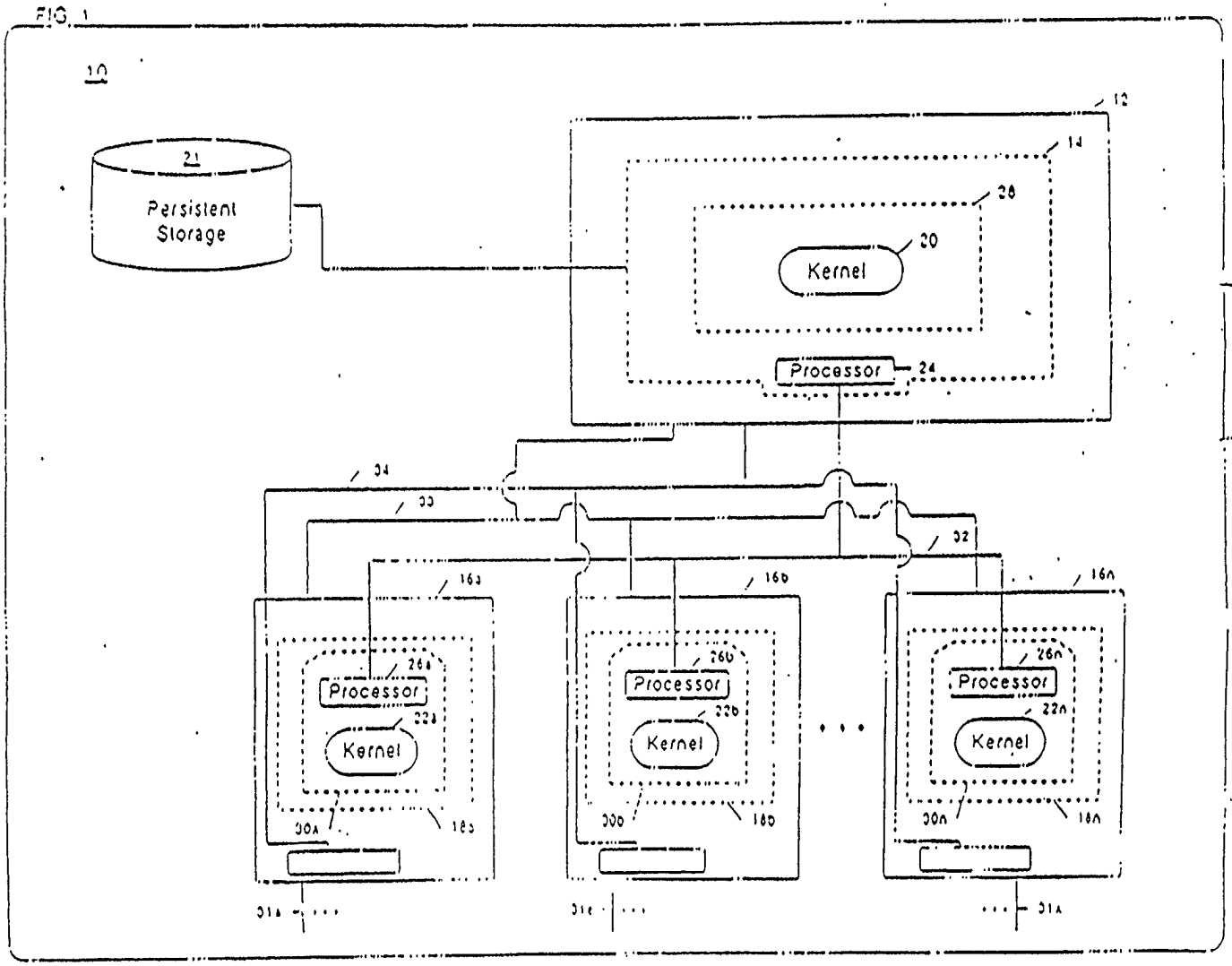
EP 0 862 118 A2

FIG. 1



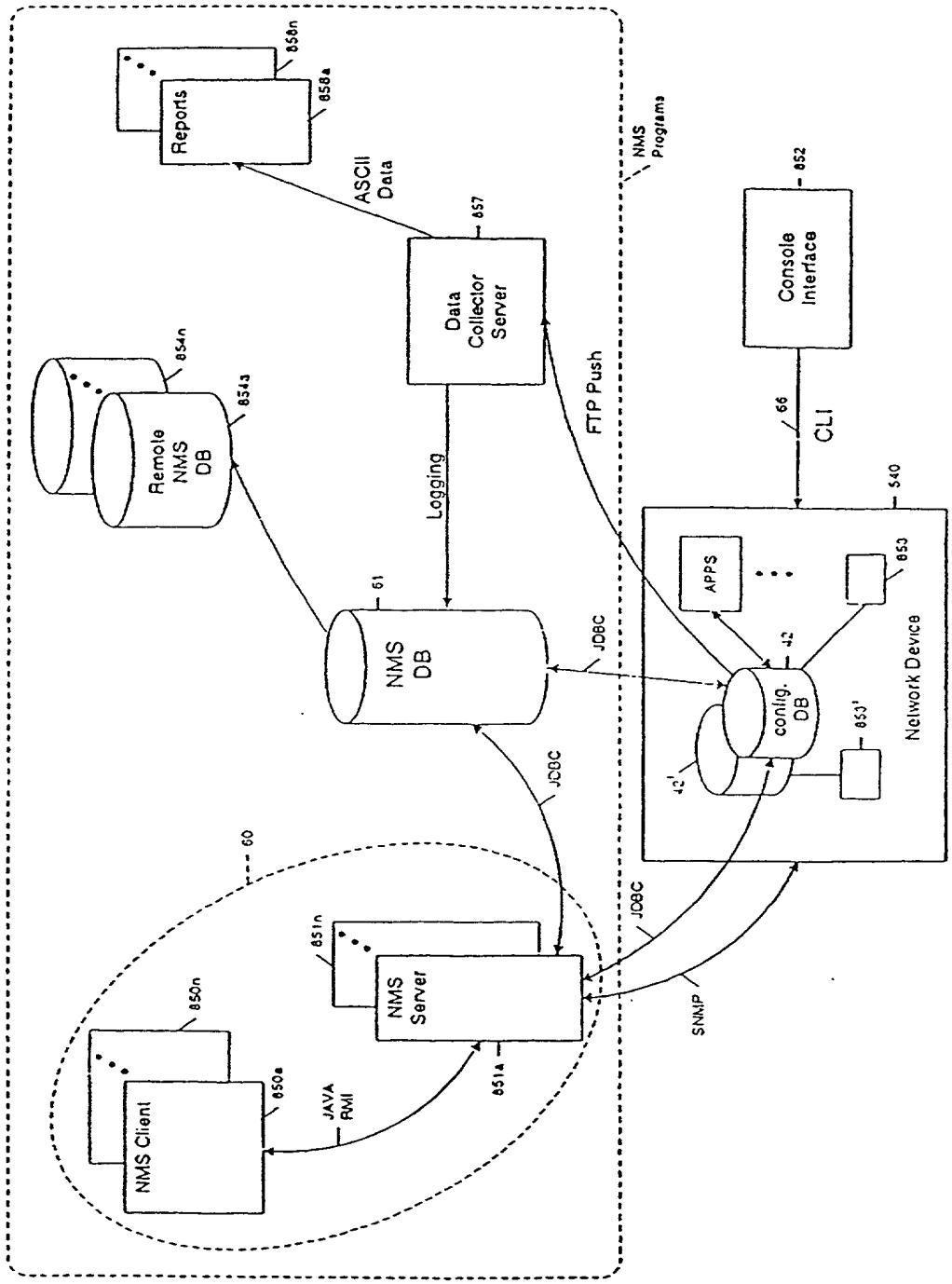
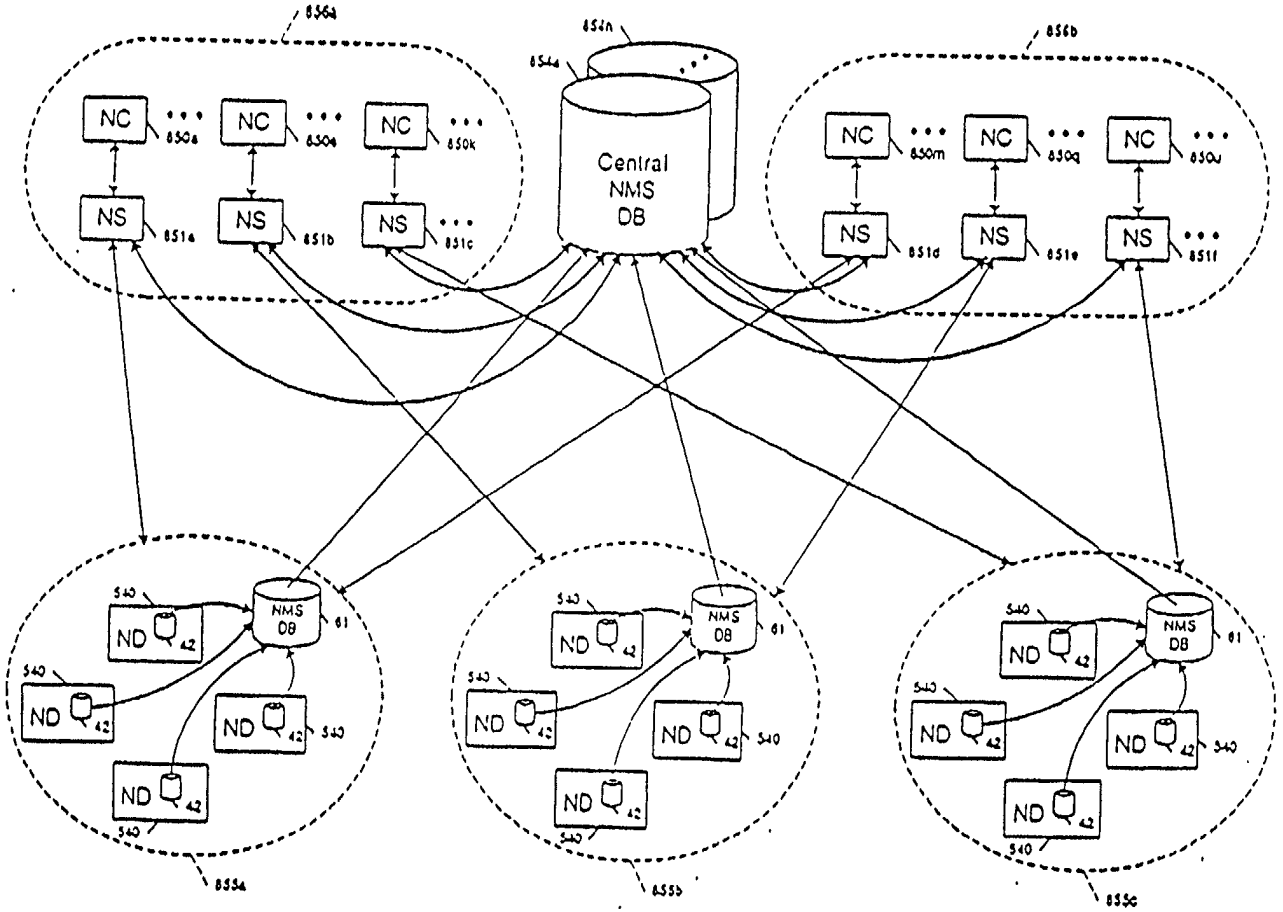

Reports
858n
858a
ASCII Data
Data Collector Server
857
NMS Programs
Console Interface
852
854n
854a
Remote NMS DB
Logging
FTP Push
66
CLI
540
61
NMS DB
JDBC
APPS
853
42
config. DB
853'
42'
Network Device
60
851n
NMS Server
851a
850n
850a
NMS Client
JAVA RMI
JDBC
SNMP

Fig. 2a

Fig. 2b



Sent By: Equipe Communications; 781 795 2031; Feb-20-1 ;:49PM; Page 2

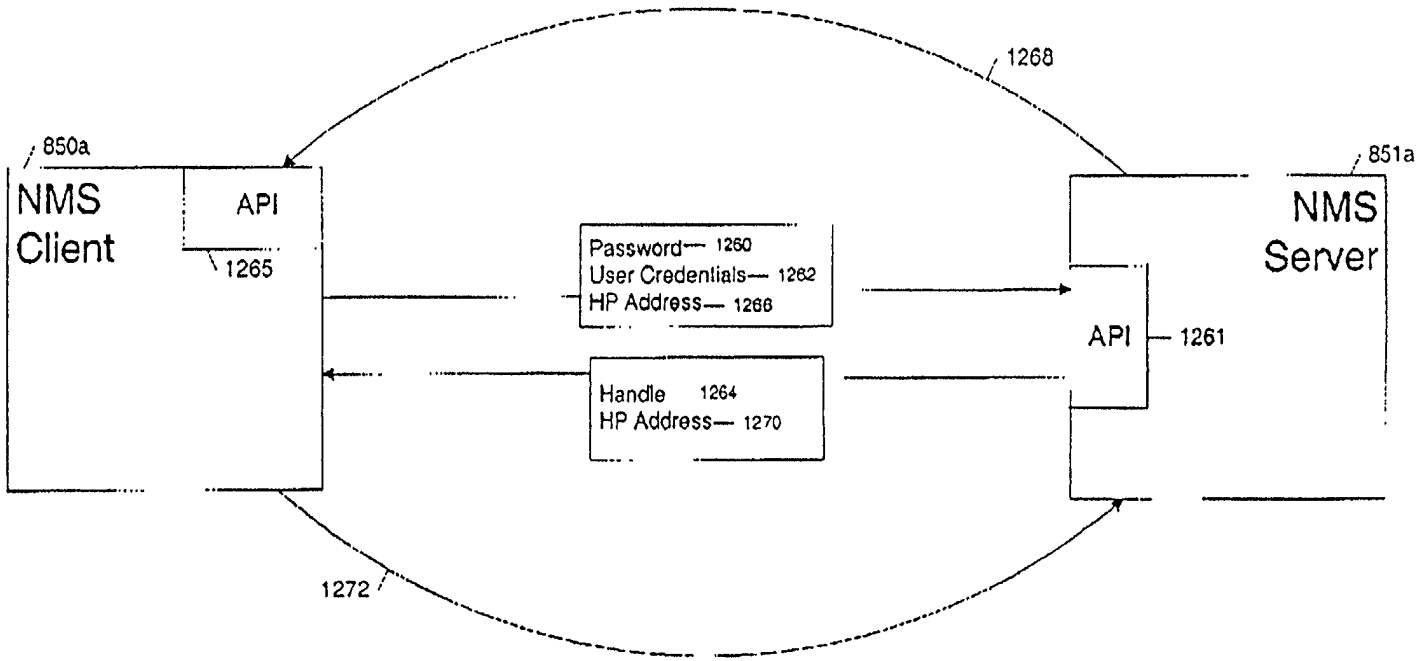


Fig. 2c

Sent By: Equipe Communications; 781 795 2031; Feb-20-t ;:50PM; Page 3

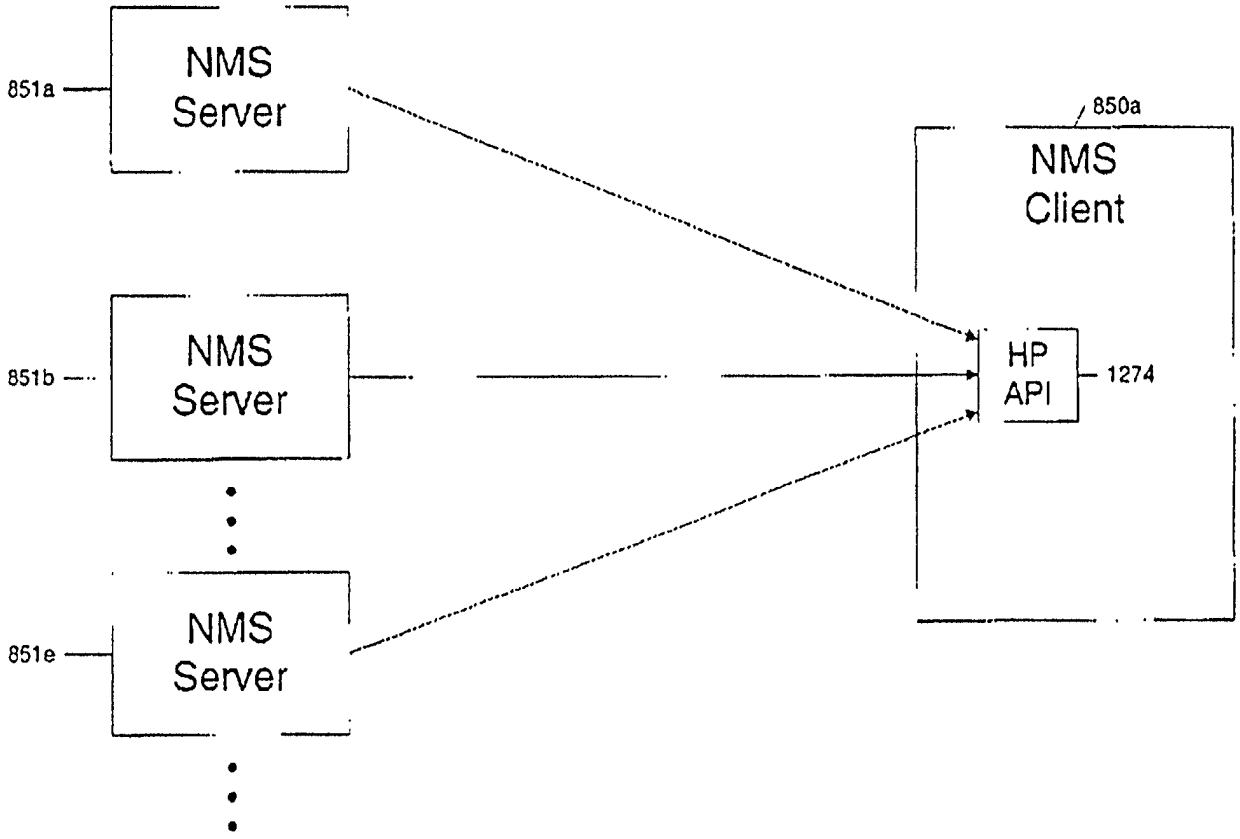


Fig. 2d

Sent By: Equipe Communications; 781 795 2031; Feb-20-(:50PM; Page 4

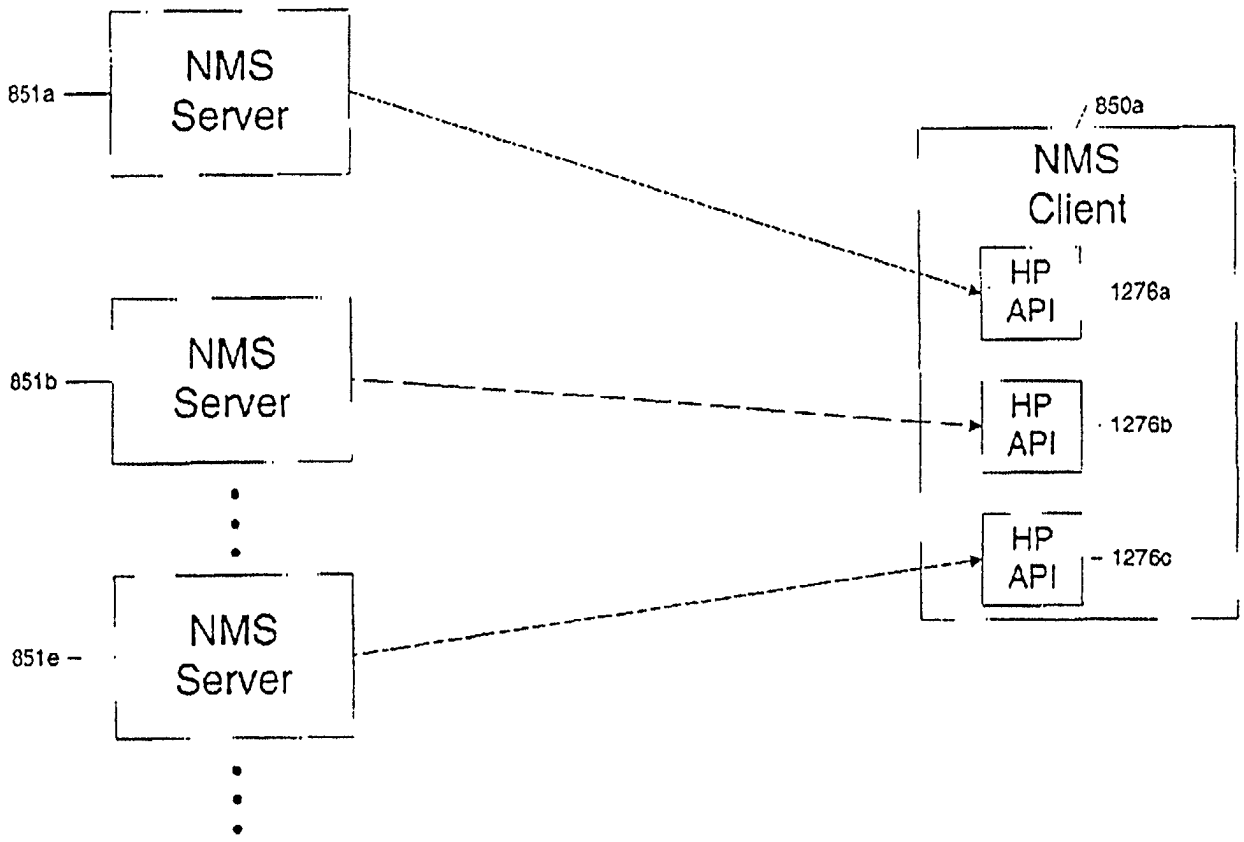


Fig. 2e

Sent By: Equipe Communications; 781 795 2031; Feb-20-(3:50PM; Page 5

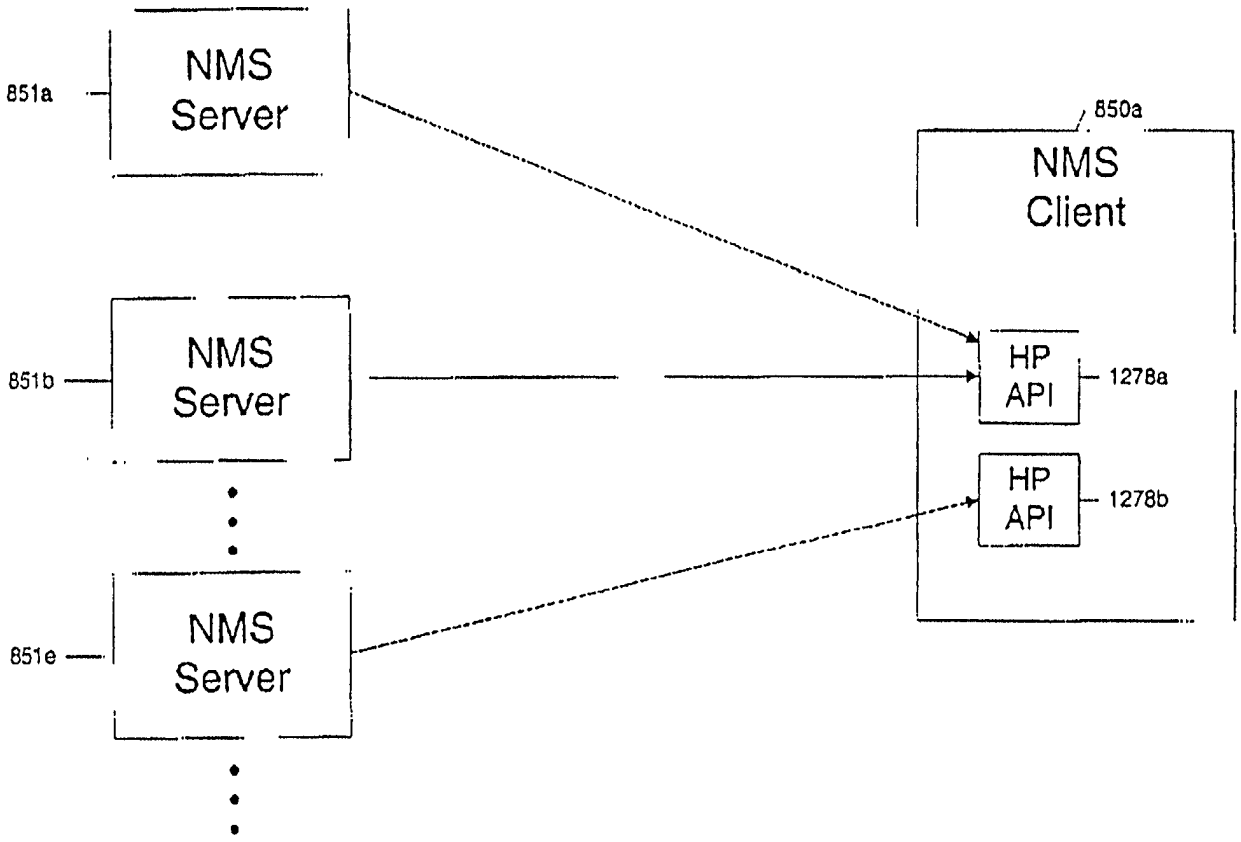


Fig. 2f

Sent By: Equipe Communications; 781 795 2031; Feb-20-0 :50PM; Page 6

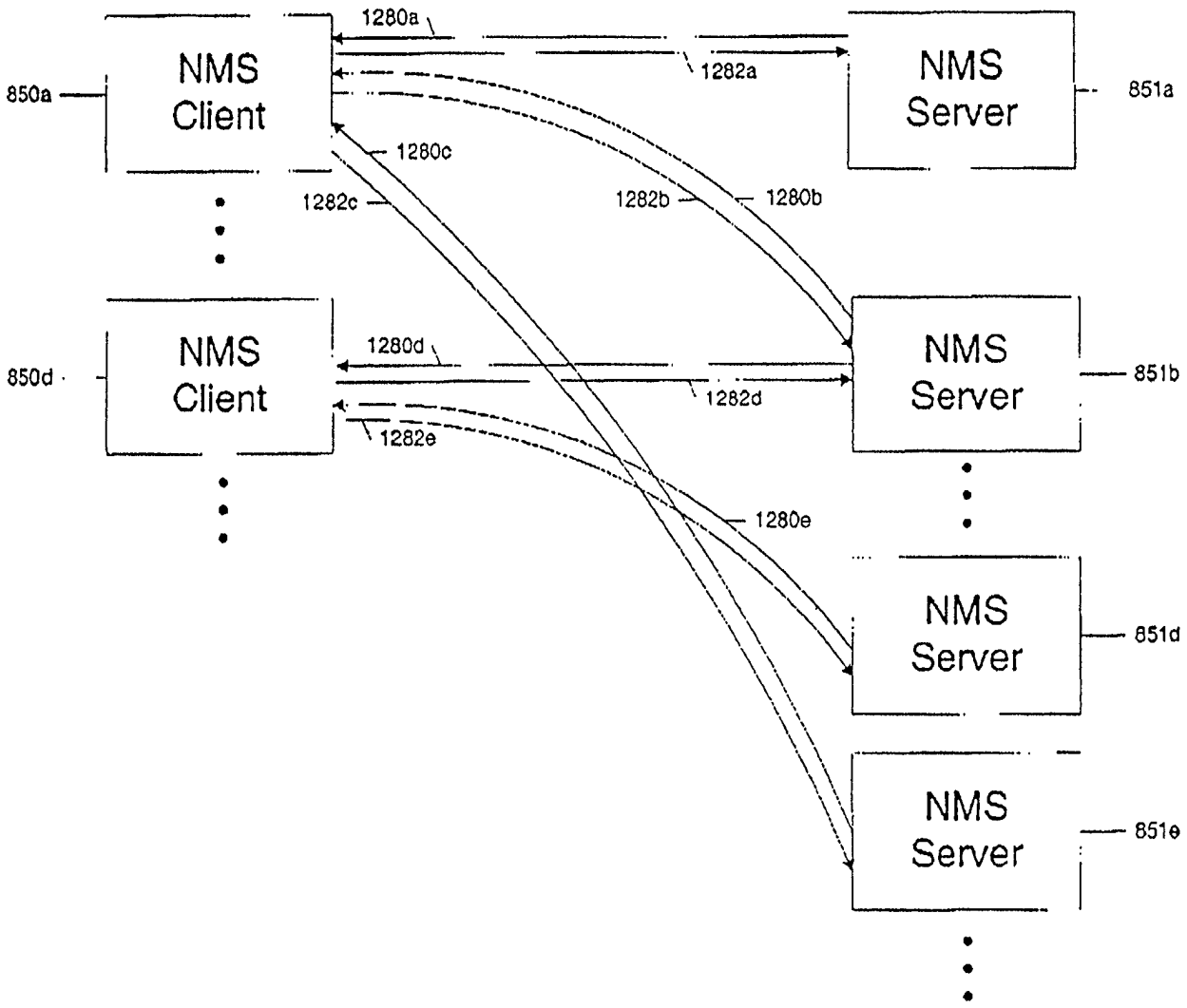


Fig. 2g

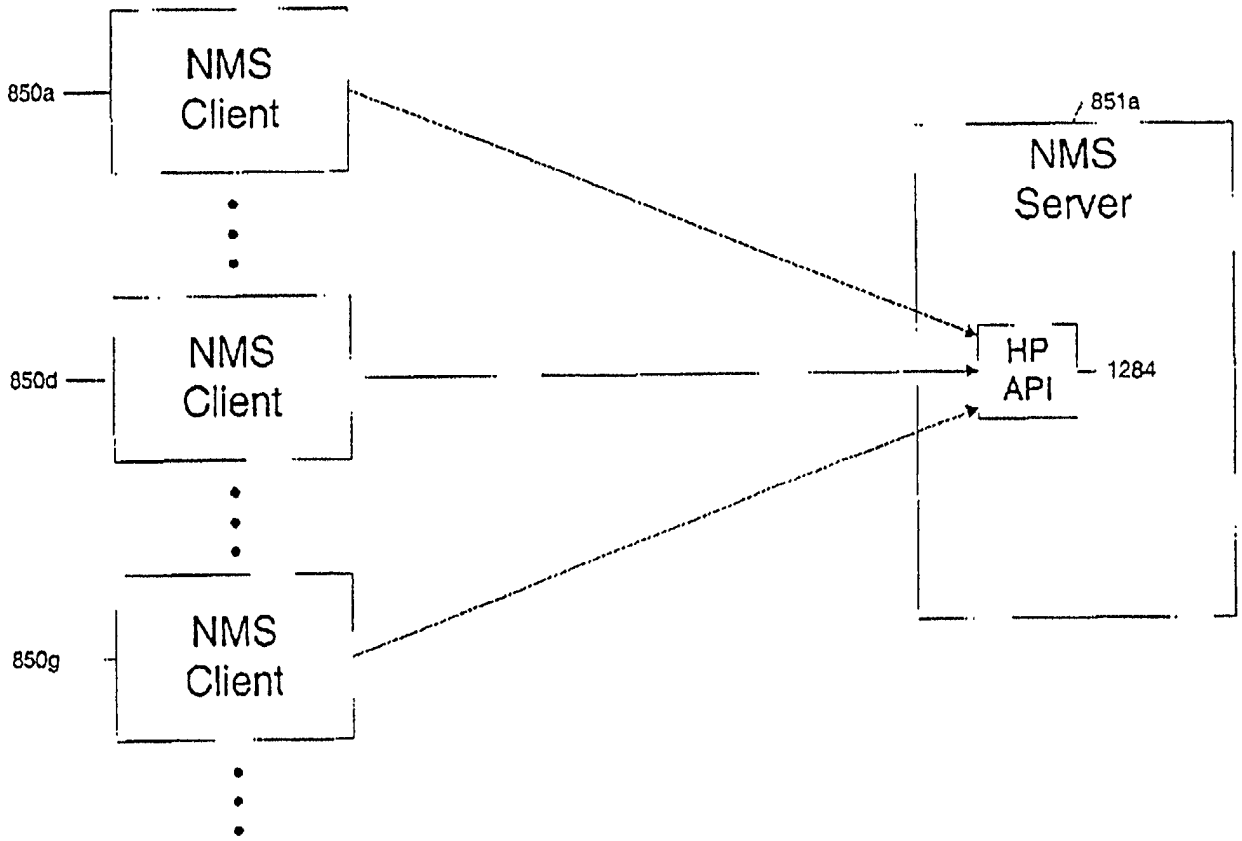

850a
NMS Client
850d
NMS Client
850g
NMS Client
851a
NMS Server
HP API
1284

Fig. 2h

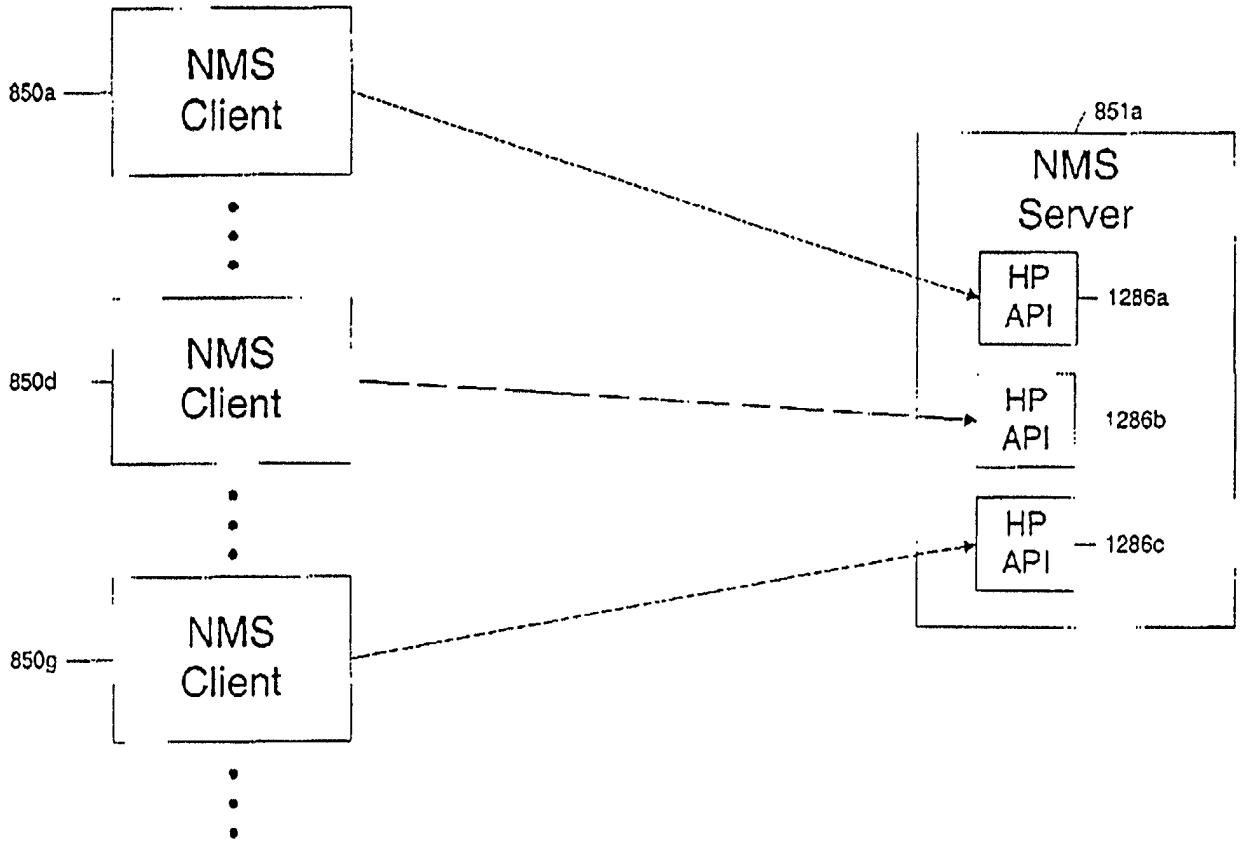

850a
NMS Client
850d
NMS Client
850g
NMS Client
851a
NMS Server
HP API
1286a
HP API
1286b
HP API
1286c

Fig. 2I

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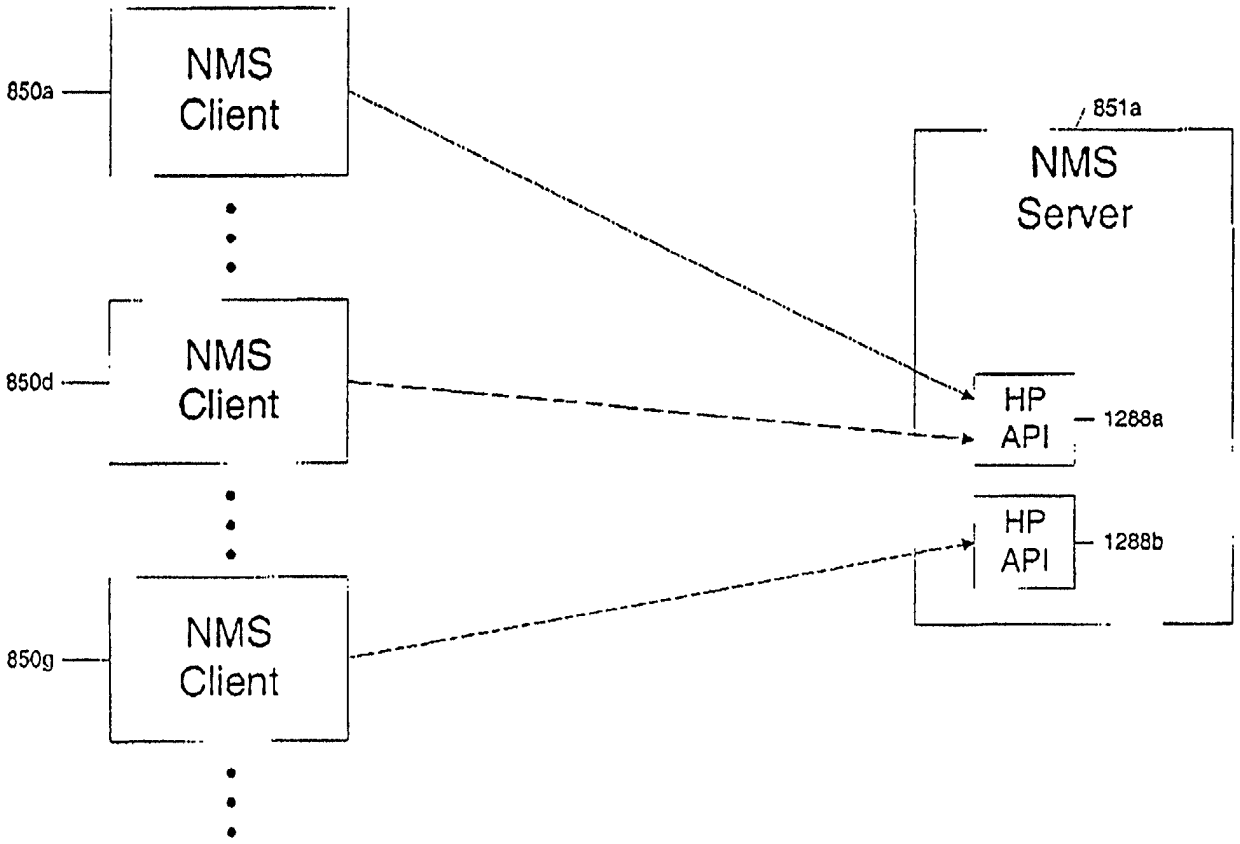

Fig. 2

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FIG. 3a

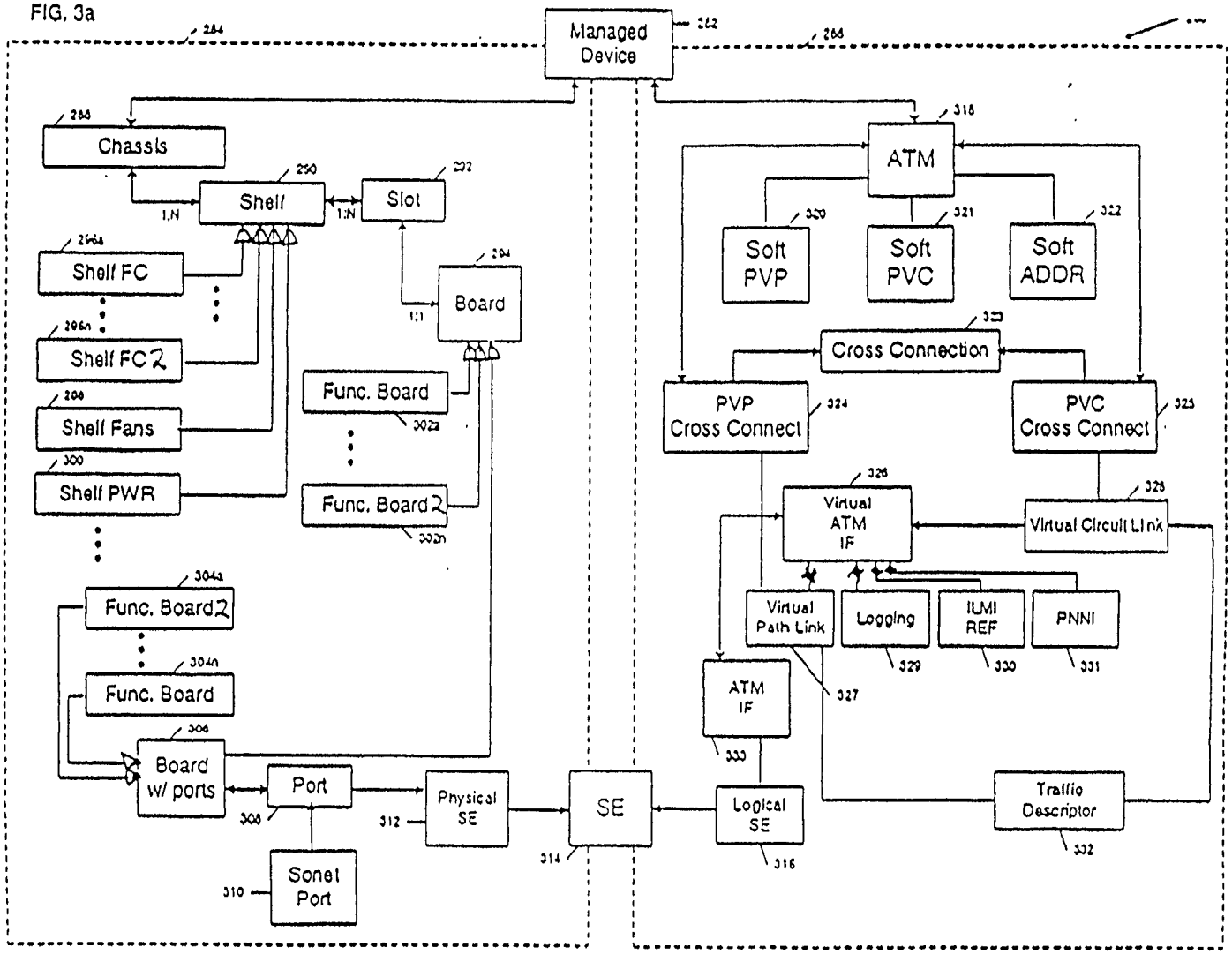


FIG. 3b

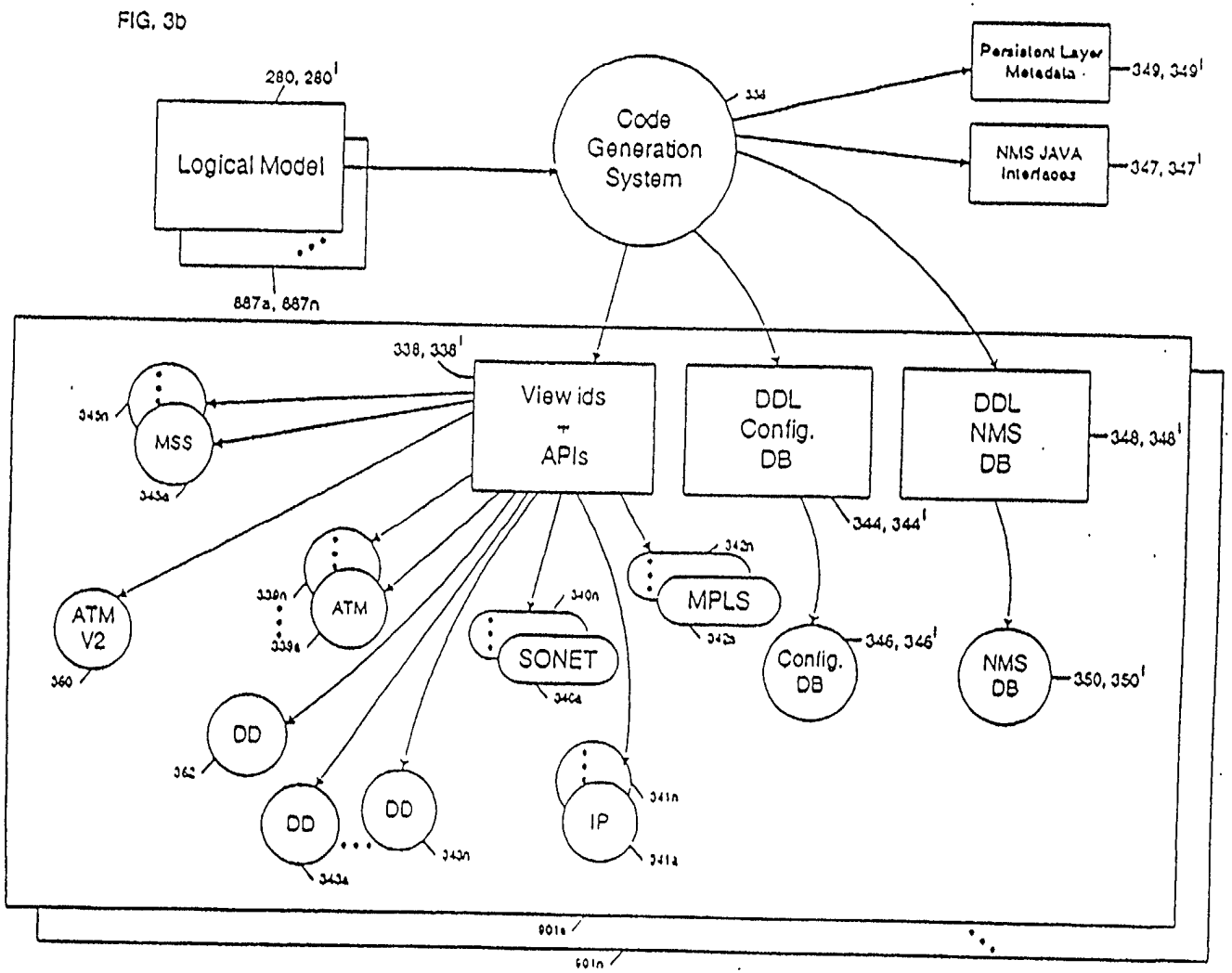

280, 280'
Logical Model
887a, 887n
Code Generation System
336
Persistent Layer Metadata
349, 349'
NMS JAVA Interfaces
347, 347'
338, 338'
View ids
APIs
DDL Config. DB
DDL NMS DB
348, 348'
344, 344'
345n
MSS
345a
ATM V2
360
339n
ATM
339a
340n
SONET
340a
342n
MPLS
342a
Config. DB
346, 346'
NMS DB
350, 350'
DD
362
DD
343a
DD
343n
341n
IP
341a
901a
901n

FIG. 3c

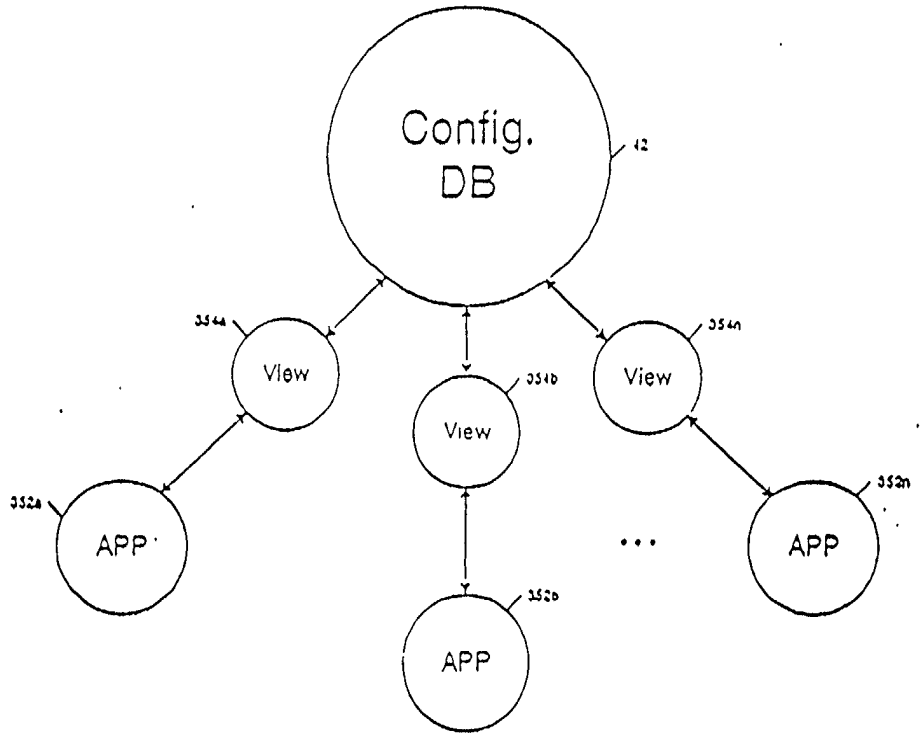
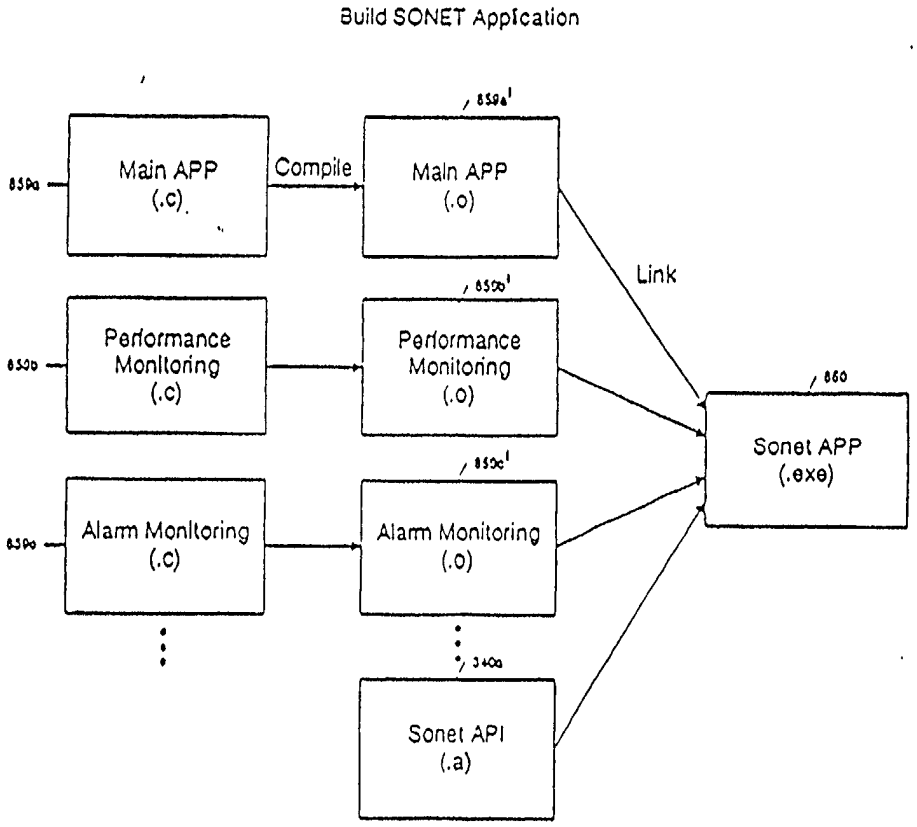


Fig. 3d


Build SONET Application
Main APP
(.c)
Compile
Main APP
(.o)
Link
Performance
Monitoring
(.c)
Performance
Monitoring
(.o)
Alarm Monitoring
(.c)
Alarm Monitoring
(.o)
Sonet API
(.a)
Sonet APP
(.exe)

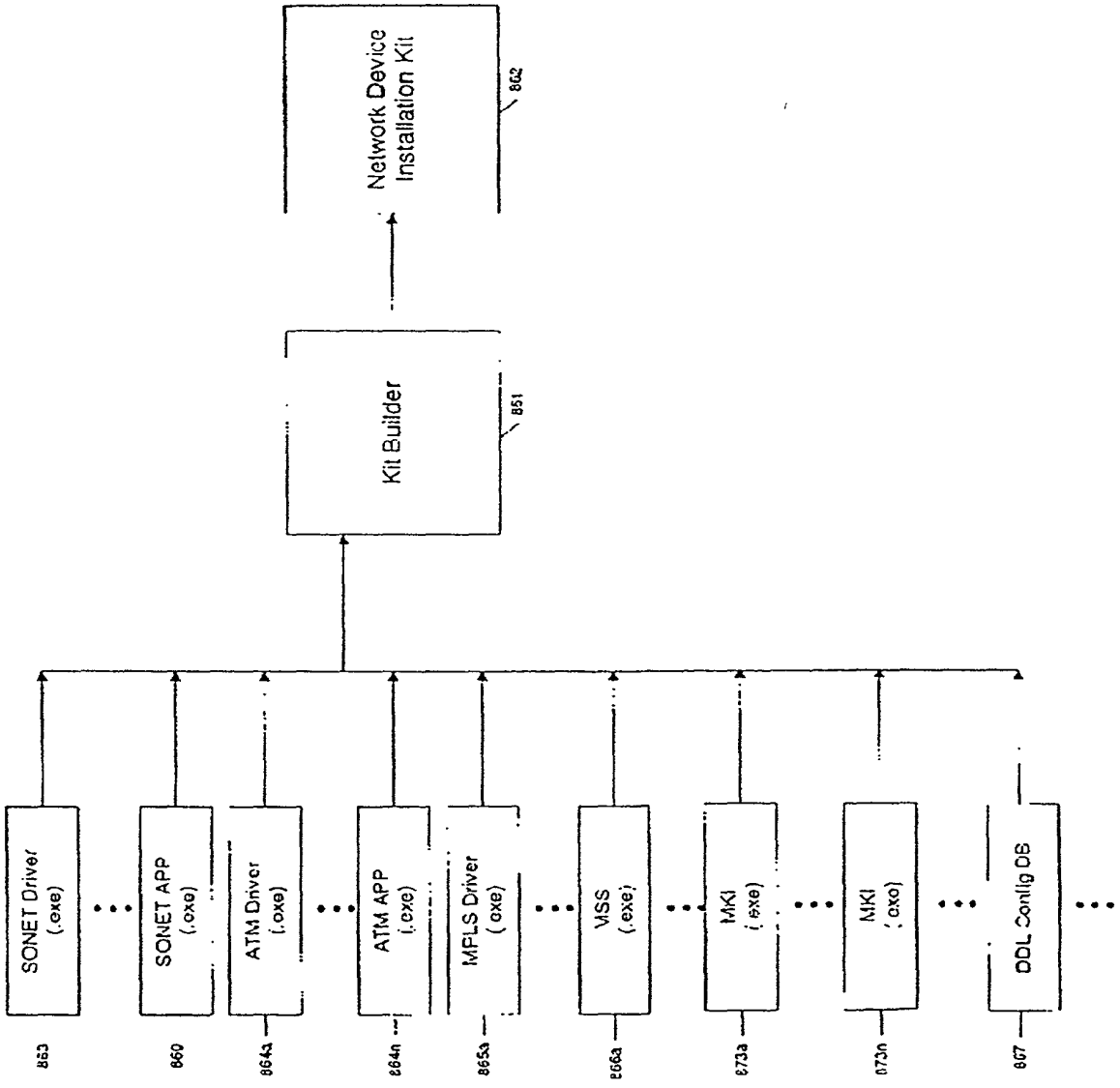
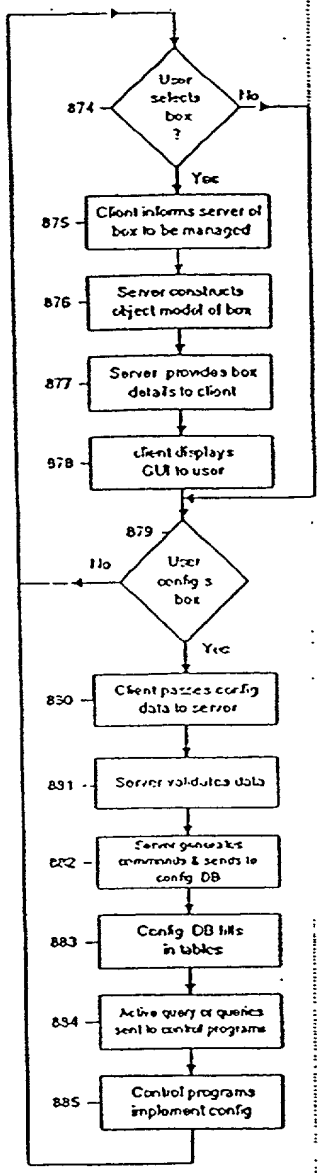

Network Device Installation Kit
862
Kit Builder
851
SONET Driver (.exe)
SONET APP (.exe)
ATM Driver (.exe)
ATM APP (.exe)
MPLS Driver (.exe)
VSS (.exe)
MKI (.exe)
MKI (.exe)
DDL Config DB
863
860
864a
864n
865a
866a
873a
873n
867

Fig. 3e

Sent By: Equipe Communications; 781 795 2031; Jul-21-00 3:34PM; Page 2/2

Fig. 3F

Fig. 3g


User selects box ?
874
No
Yes
875
Client informs server of box to be managed
876
Server constructs object model of box
877
Server provides box details to client
878
client displays GUI to user
879
User config s box
No
Yes
880
Client passes config data to server
881
Server validates data
882
Server generates commands & sends to config DB
883
Config DB fills in tables
884
Active query or queries sent to control programs
885
Control programs implement config

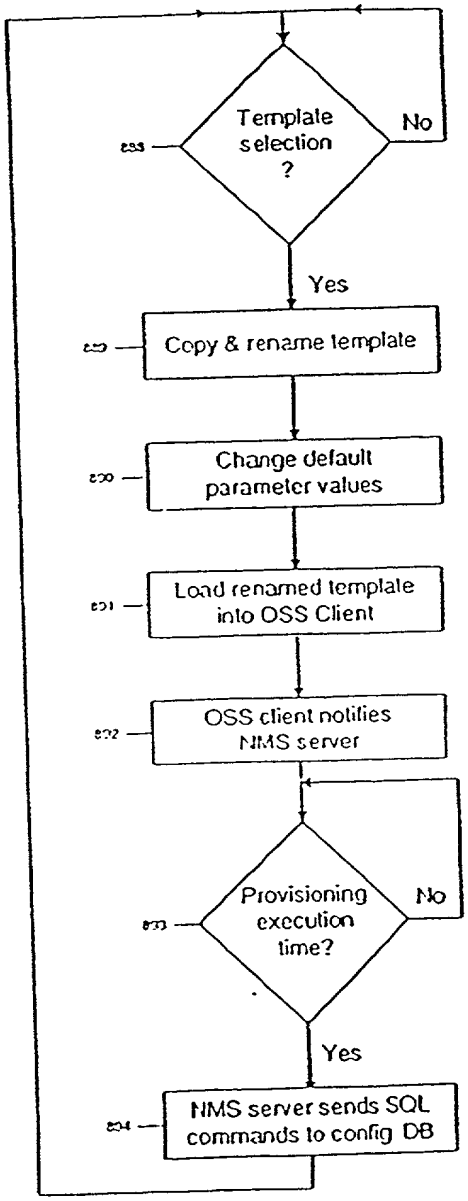


Fig. 3h

Sent By: Equipe Communications; 781 795 2031; Jul-21-00 2:41PM; Page 11

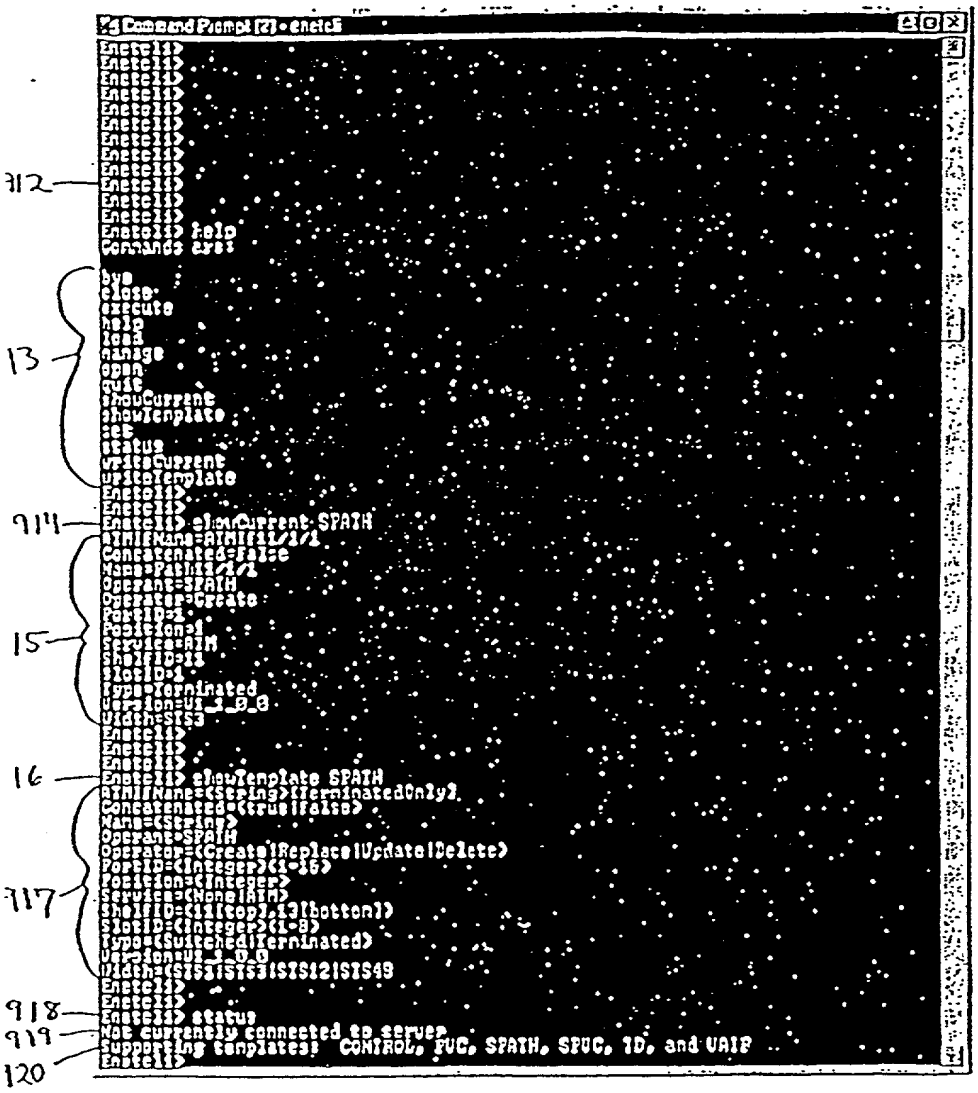

Command Prompt (2) - enetcli
Enetcli>
Enetcli> help
Commands are:
bye
clear
execute
help
load
manage
open
quit
showCurrent
showTemplate
set
status
writeCurrent
writeTemplate
Enetcli> showCurrent SPATH
AtmIfName=AtmIf1/1/1
Concatenated=False
Name=Path1/1/1
Operand=SPATH
Operator=Create
PortID=1
Position=1
Service=AIM
ShelfID=11
SlotID=1
Type=Terminated
Version=UI_3_0_0
Width=STS3
Enetcli> showTemplate SPATH
AtmIfName=(String)[TerminatedOnly]
Concatenated=(true|false)
Name=(String)
Operand=SPATH
Operator=(Create|Replace|Update|Delete)
PortID=(Integer)(1-16)
Position=(Integer)
Service=(None|AIM)
ShelfID=(11[top],13[bottom])
SlotID=(Integer)(1-8)
Type=(Switched|Terminated)
Version=UI_3_0_0
Width=(STS1|STS3|STS12|STS48
Enetcli> status
Not currently connected to server.
Supporting templates: CONTROL, PVC, SPATH, SPVC, ID, and VAIF
Enetcli>
312
13
914
15
16
917
918
919
120

Fig. 3i

Fig. 3j

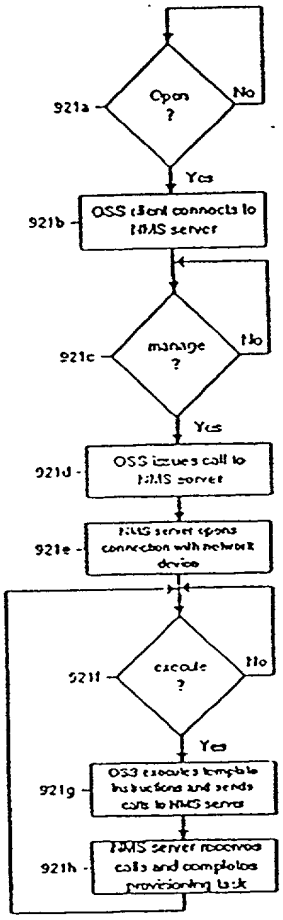

921a
Open ?
No
Yes
921b
OSS client connects to NMS server
921c
manage ?
No
Yes
921d
OSS issues call to NMS server
921e
NMS server opens connection with network device
921f
execute ?
No
Yes
921g
OSS executes template instructions and sends calls to NMS server
921h
NMS server receives calls and completes provisioning task

Fig. 3K

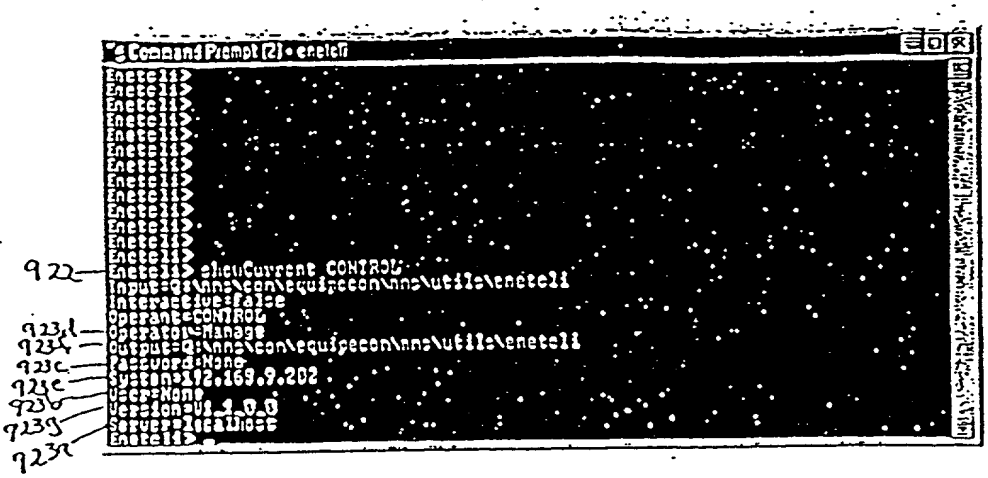

Command Prompt [2] - enetcli
Enetcli>
Enetcli> showCurrent CONTROL
input=Q:\nms\con\equipecon\nms\utils\enetcli
interactive=false
operand=CONTROL
operator=Manage
output=Q:\nms\con\equipecon\nms\utils\enetcli
password=None
system=192.169.9.202
uacp=None
version=v1_0_0
server=localhost
Enetcli>
922
923a
923b
923c
923d
923e
923f
923g
923h

FIG. 3L

924 BATCH.

Operant=BATCH
Operator=Execute
Version=V1_1_0_0
924a—Task1=execute-SPATH
924b—Task2=execute-PVC
924c—Task3=execute-SPVC
924d—Task4=load-SPVC-spvc1
924e—Task5=execute-SPVC
924f—Task6=load-SPVC-spvc2
924g—Task7=execute-SPVC

.
.
.

924g—Task50=set-SPATH-PortID-3
924h—Task51=execute-SPATH
924i—Task52=set-SPATH-SlotID-2
924j—Task53=execute-SPATH

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-1 FIG. 3m

925

Operant=BATCH
Operator=Execute
Version=V1_1_0_0
925a—Task1=execute-CONTROL
925b—Task2=execute-SPATH
925c—Task3=set-SPATH-PortID-3
925d—Task4=execute-SPATH

.
.
.

925e—Task61=set-CONTROL-System-192.168.9.201
925f—Task62=execute-CONTROL
925g—Task63=execute-SPATH

.
.
.

925h—Task108=close
925i—Task109=set-CONTROL-Server-Server1
925j—Task110=set-CONTROL-System-192.168.8.200
925k—Task111=execute-CONTROL
925l—Task112=execute-SPATH

.
.
.

US 6,718,240 B2 Apr. 6, 2004

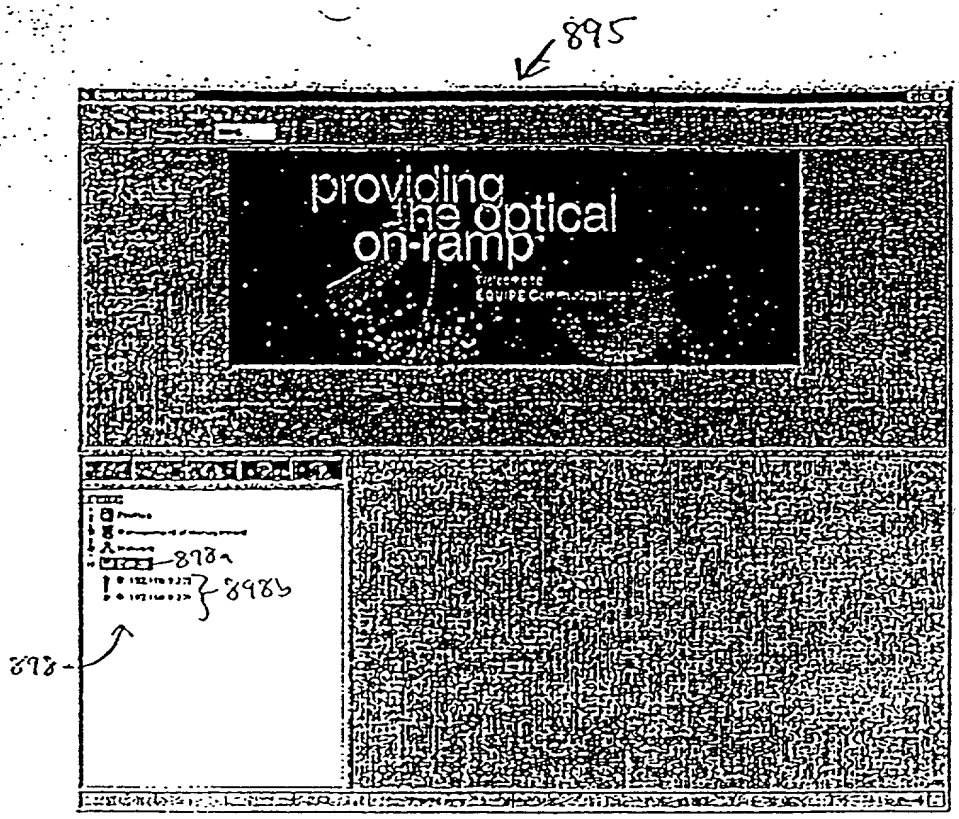


Fig. 4a

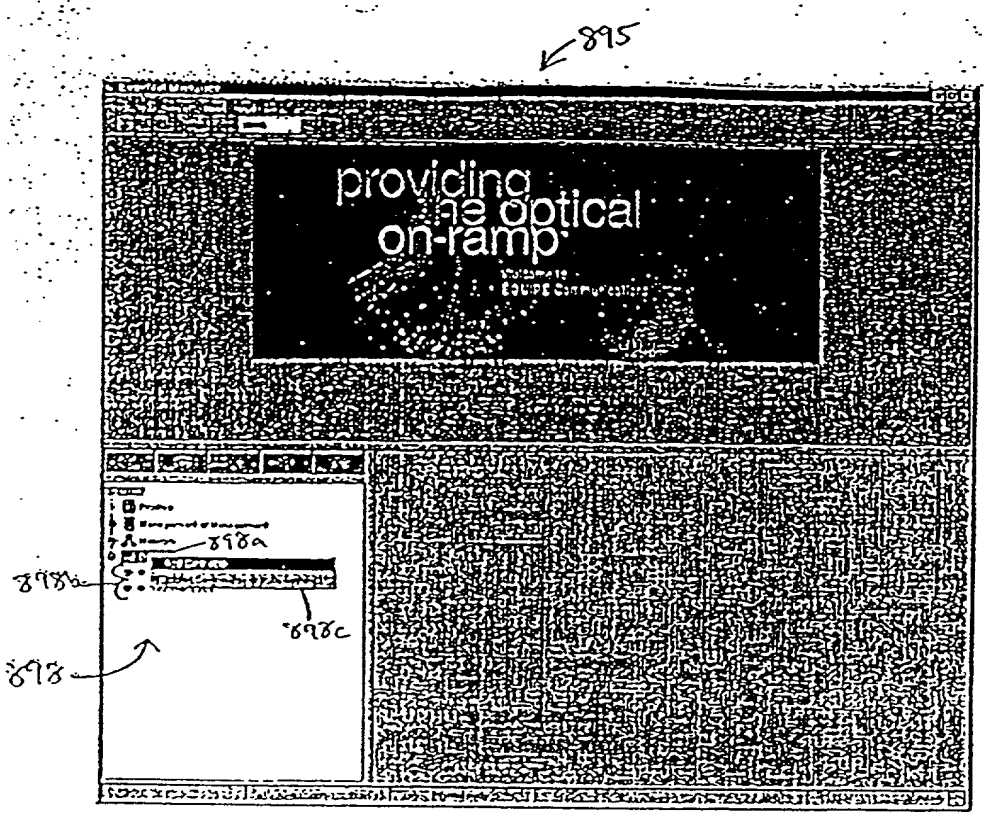


Fig. 45

Fig. 4c

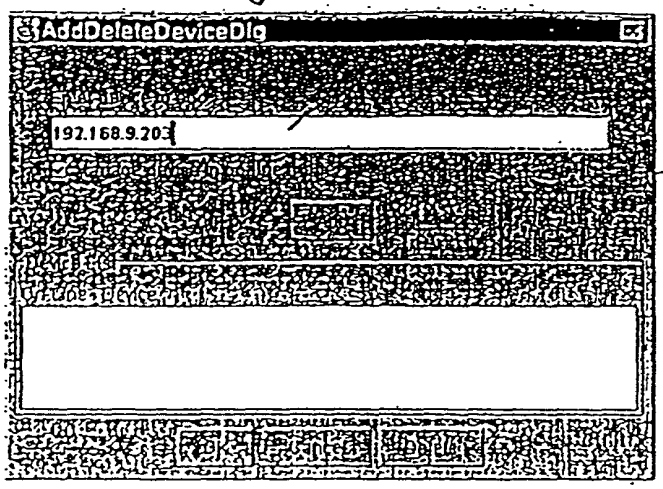
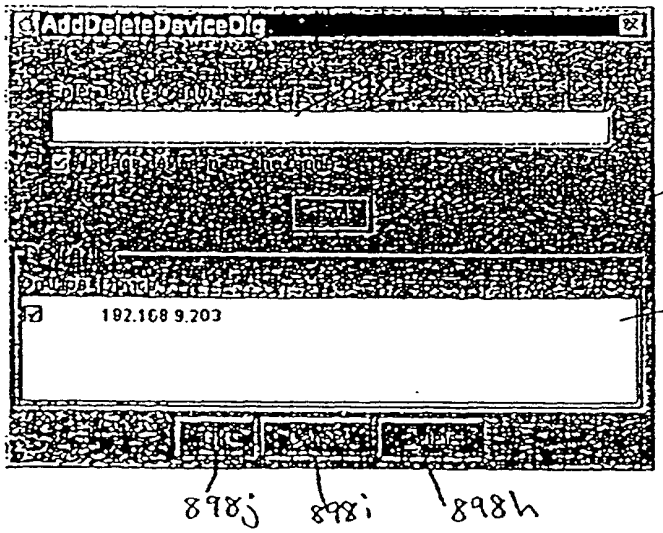

AddDeleteDeviceDlg
192.168.9.203
898d

Fig. 4d


AddDeleteDeviceDlg
898d
192.168 9.203
898g
898j
898i
898h

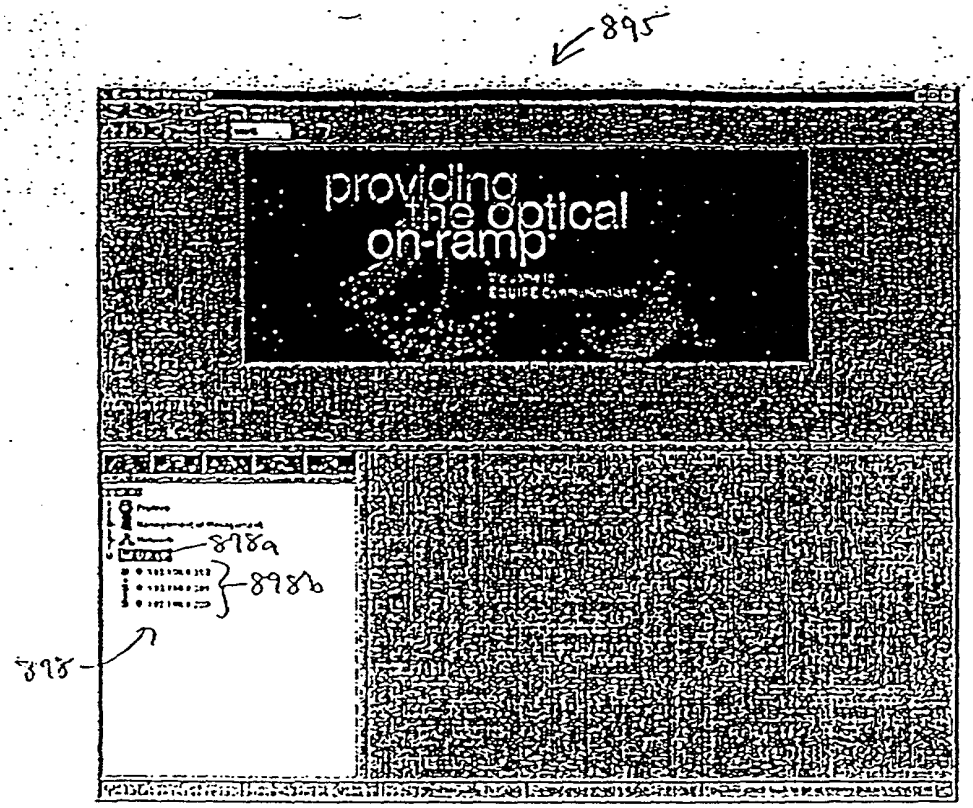


Fig. 4e

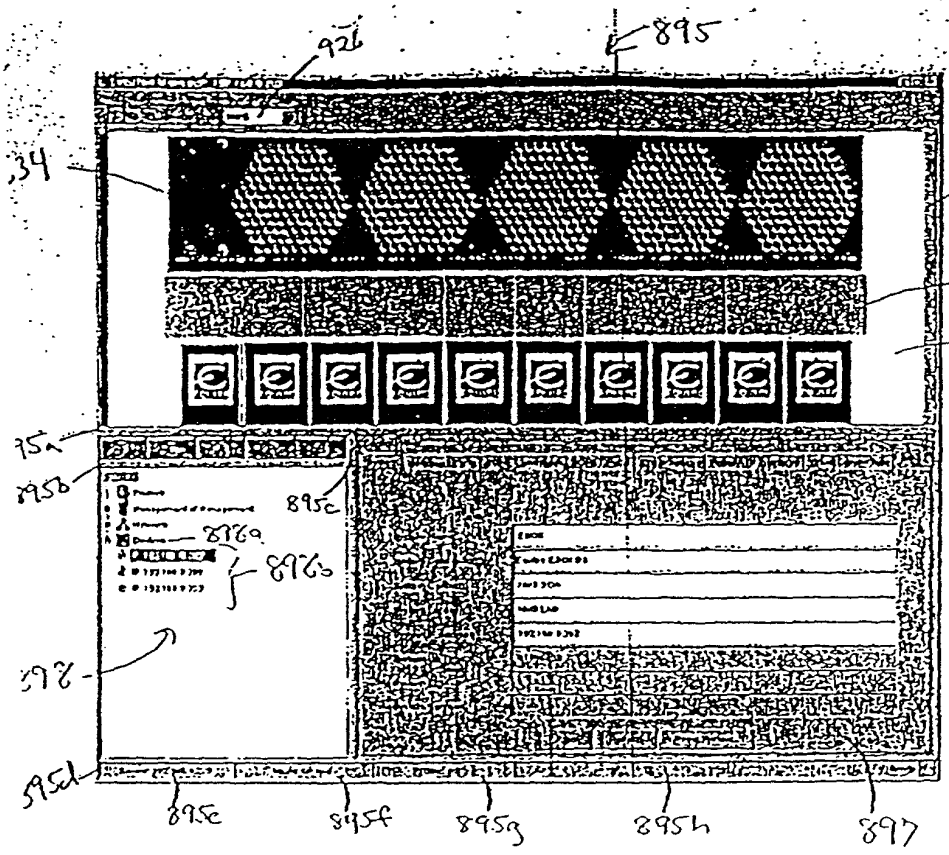

926
895
34
926a
896a
896b
75
895b
895c
926a
926b
895
895e
895f
895g
895h
897

Fig. 4f

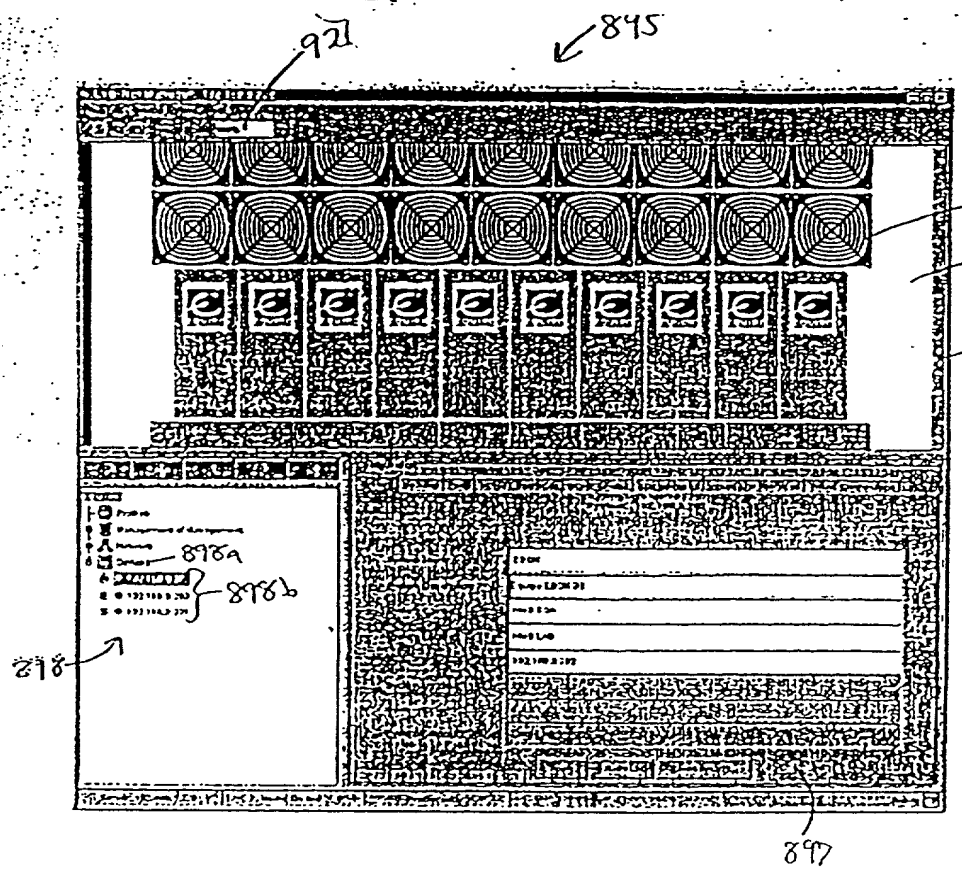


Fig. 4g

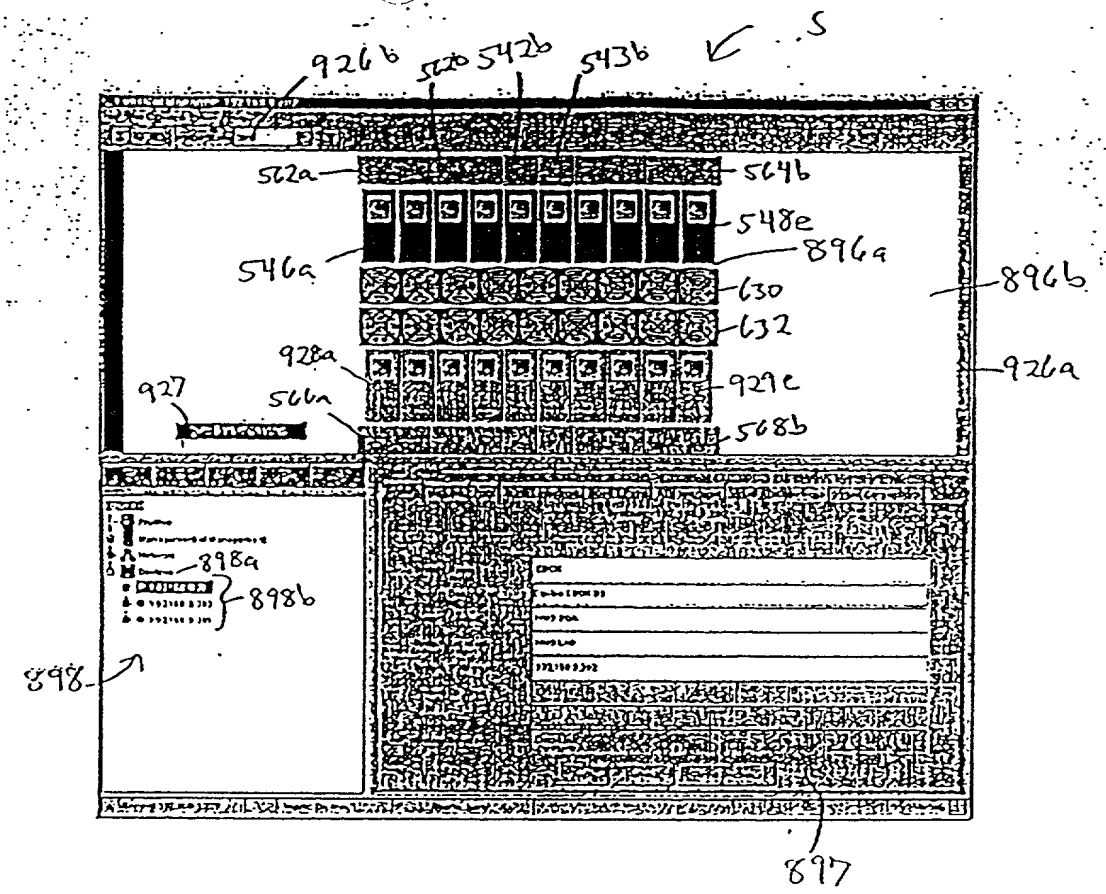

926b
520
542b
543b
S
562a
564b
548e
546a
896a
896b
630
632
928a
929c
926a
927
566a
568b
898a
898b
898
897

Fig. 4h

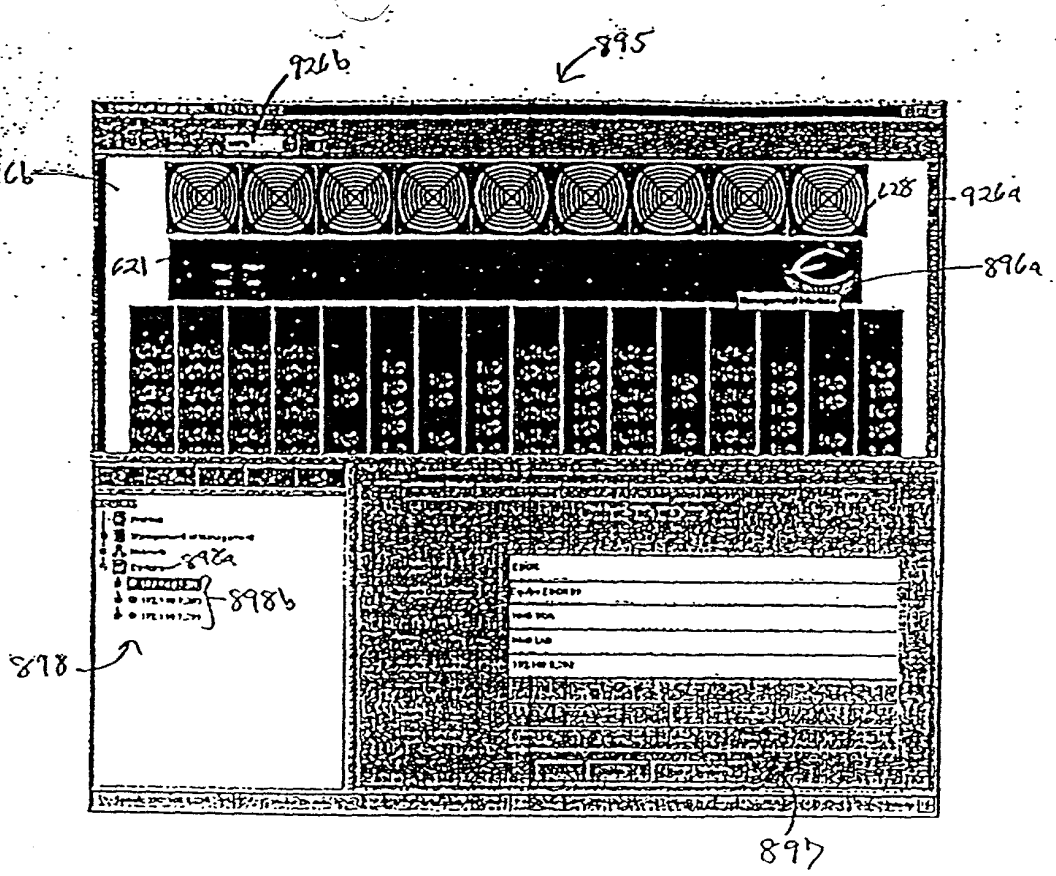


Fig. 4i

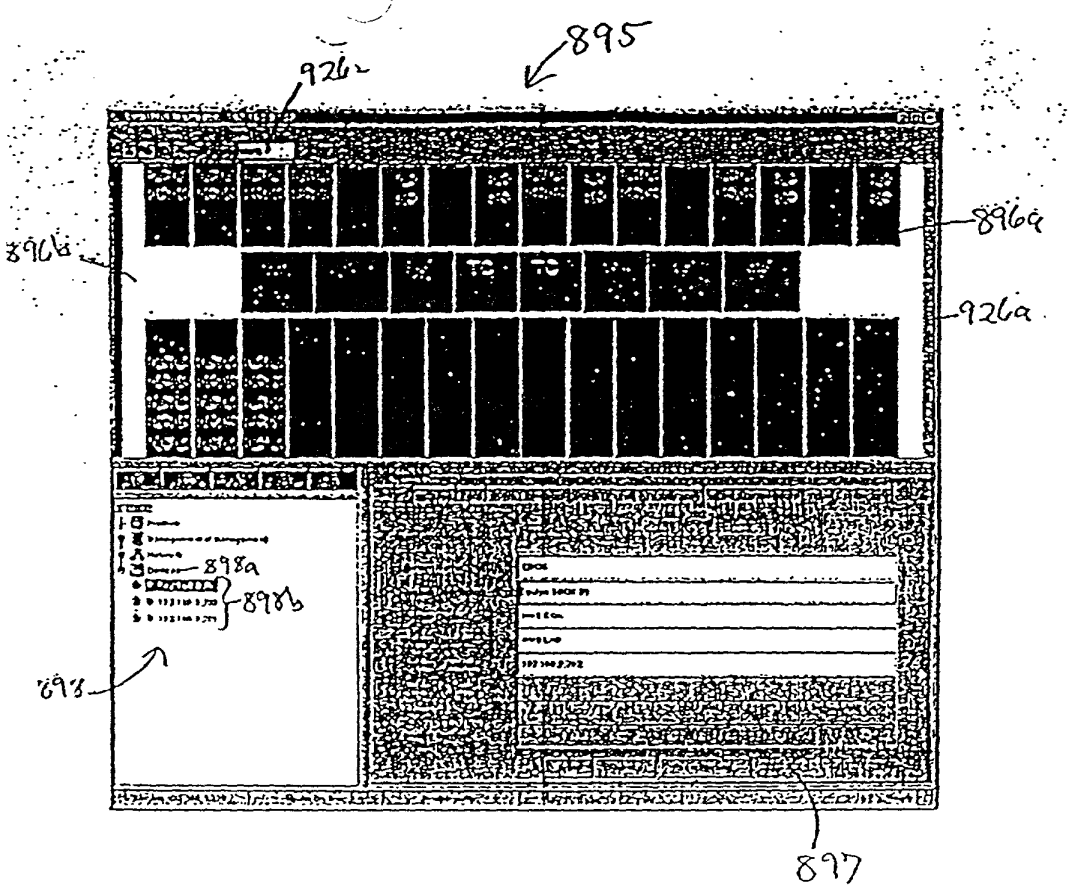


Fig. 4j

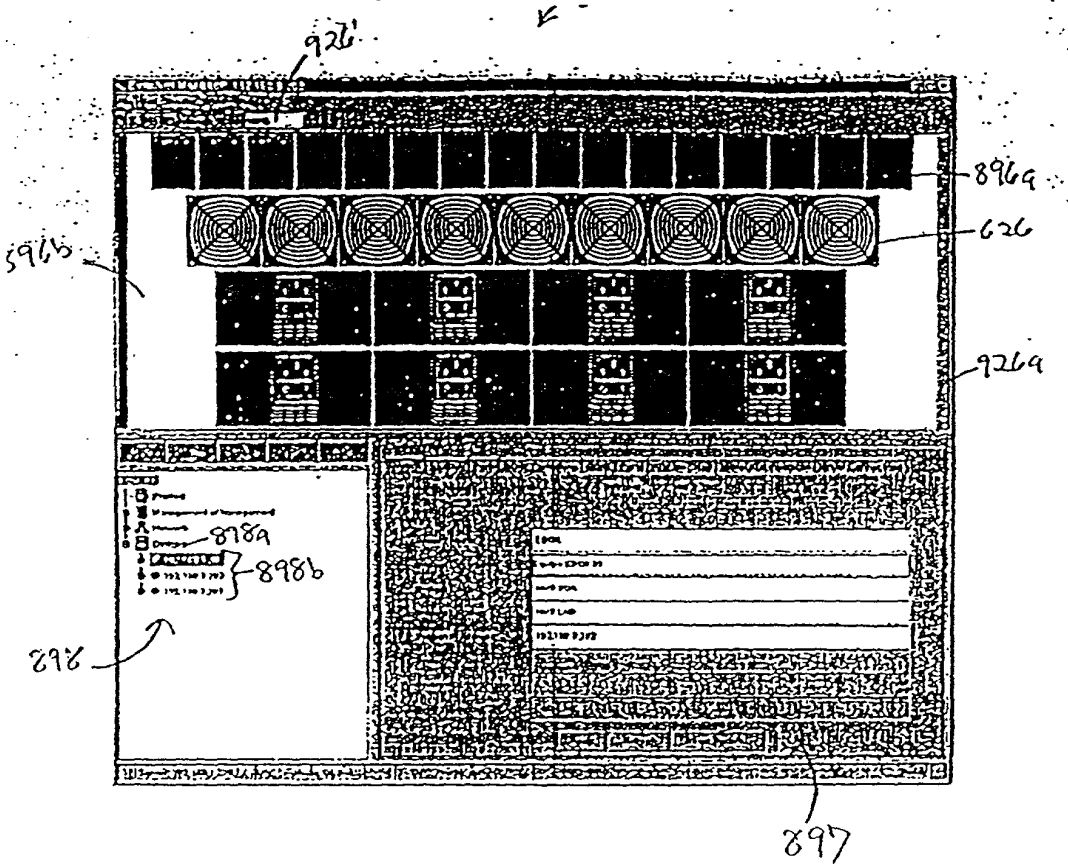


Fig. 4K

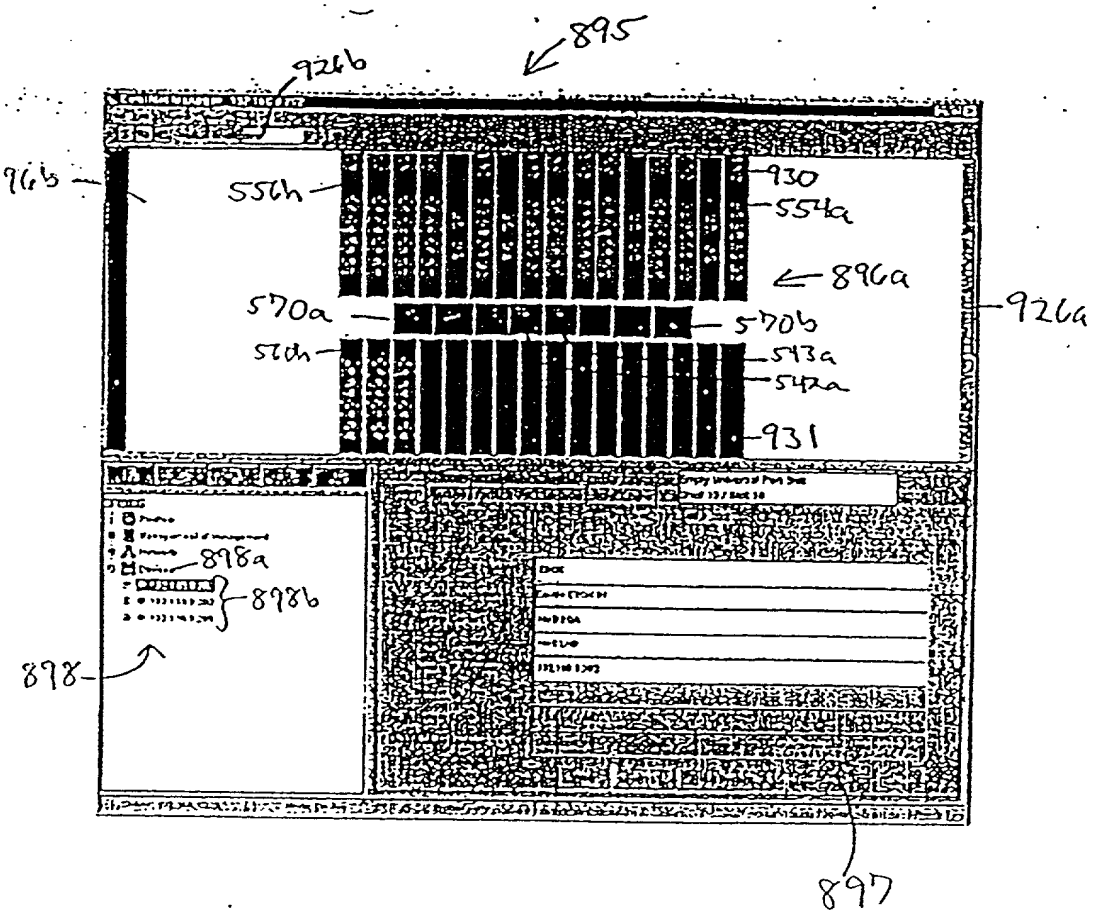

895
926b
965
556h
930
554a
896a
570a
570b
926a
512h
543a
542a
931
898a
898b
898
897

Fig. 41

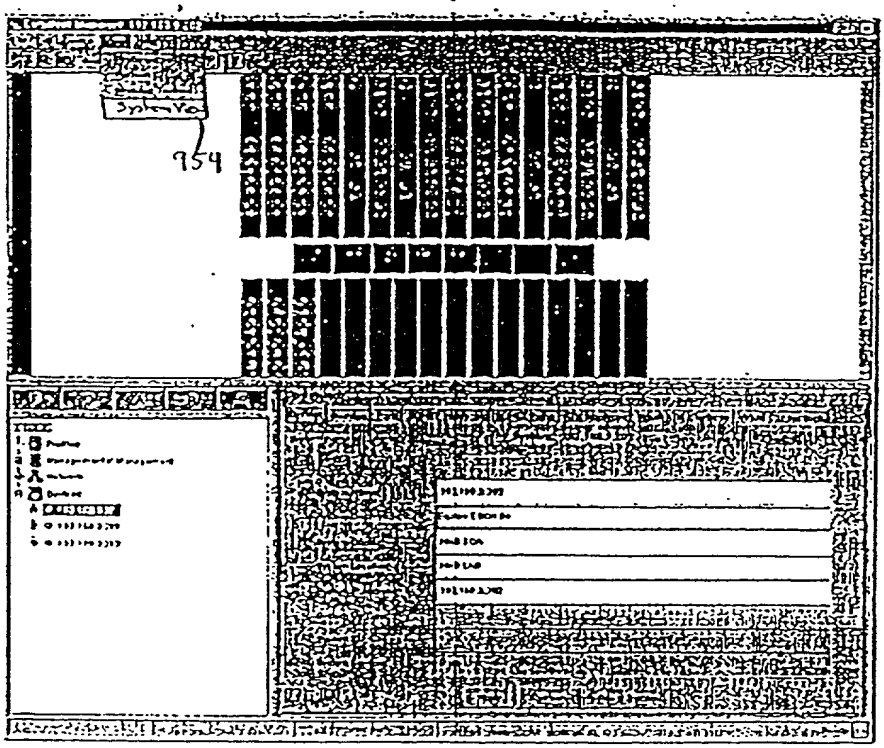


Fig. 4m

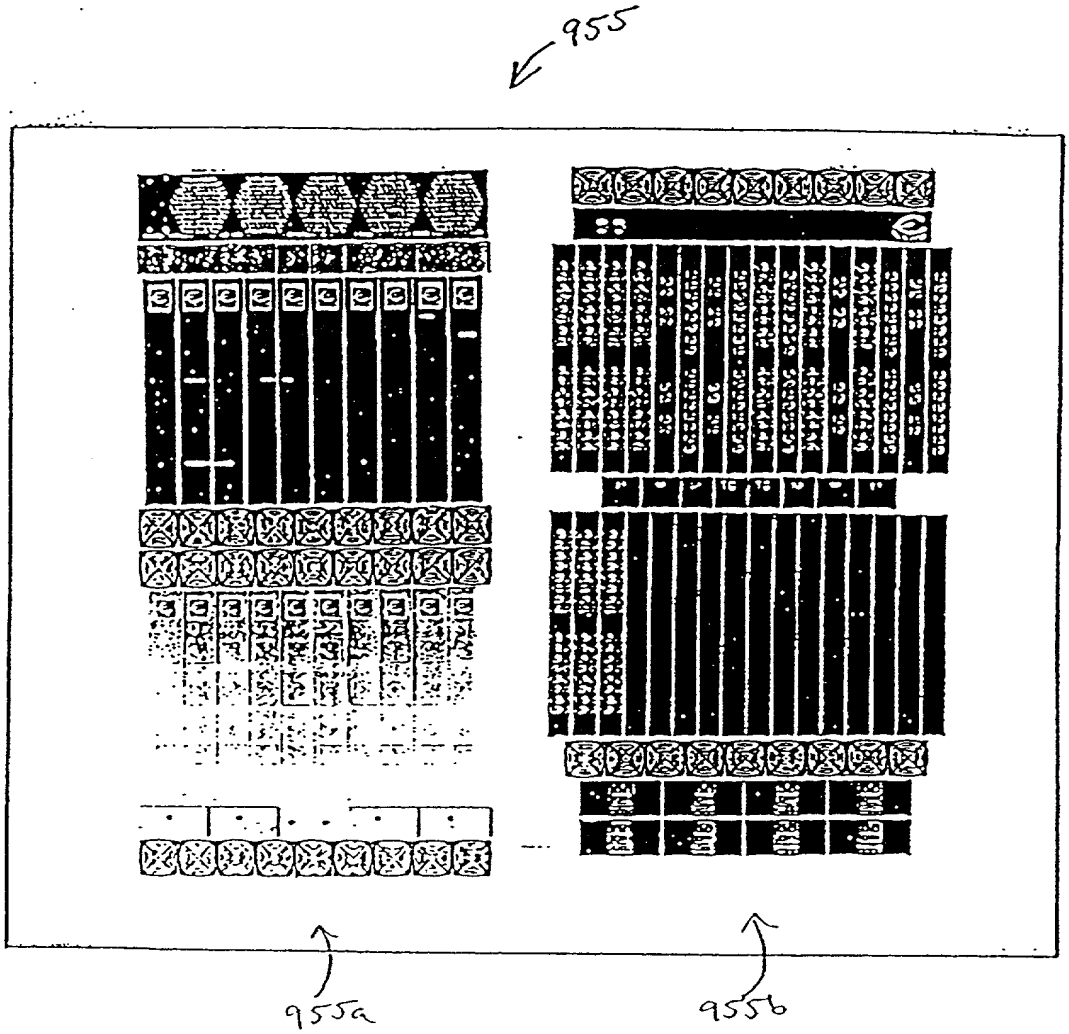


Fig. 4n

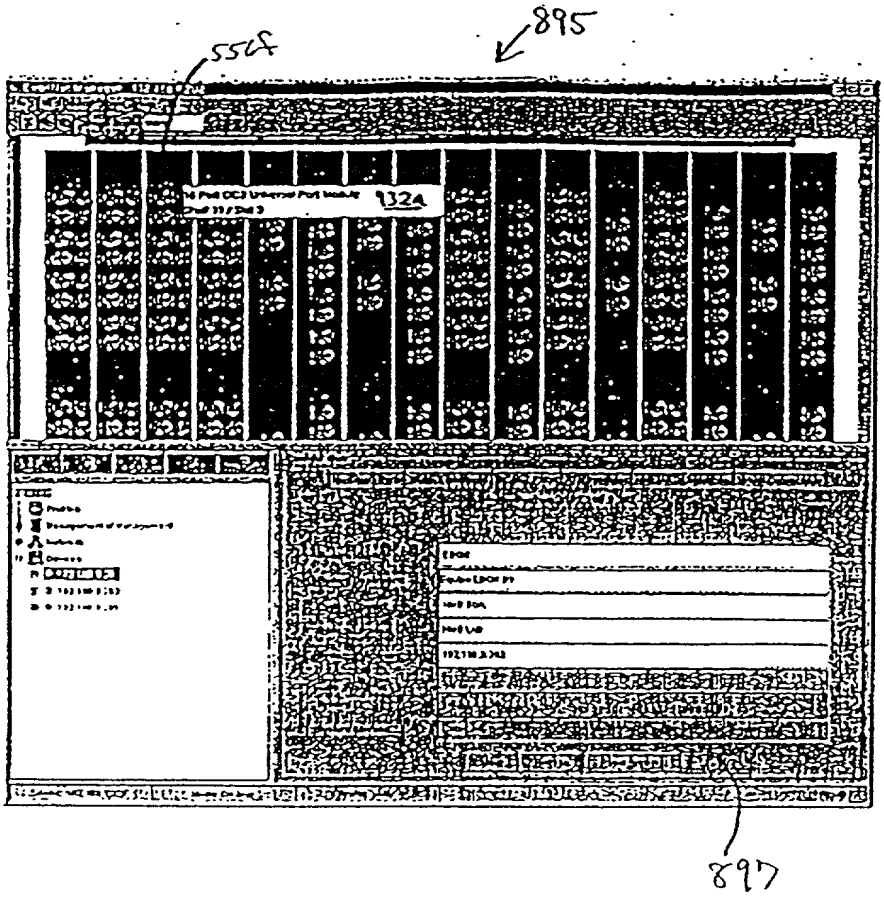


Fig. 4o

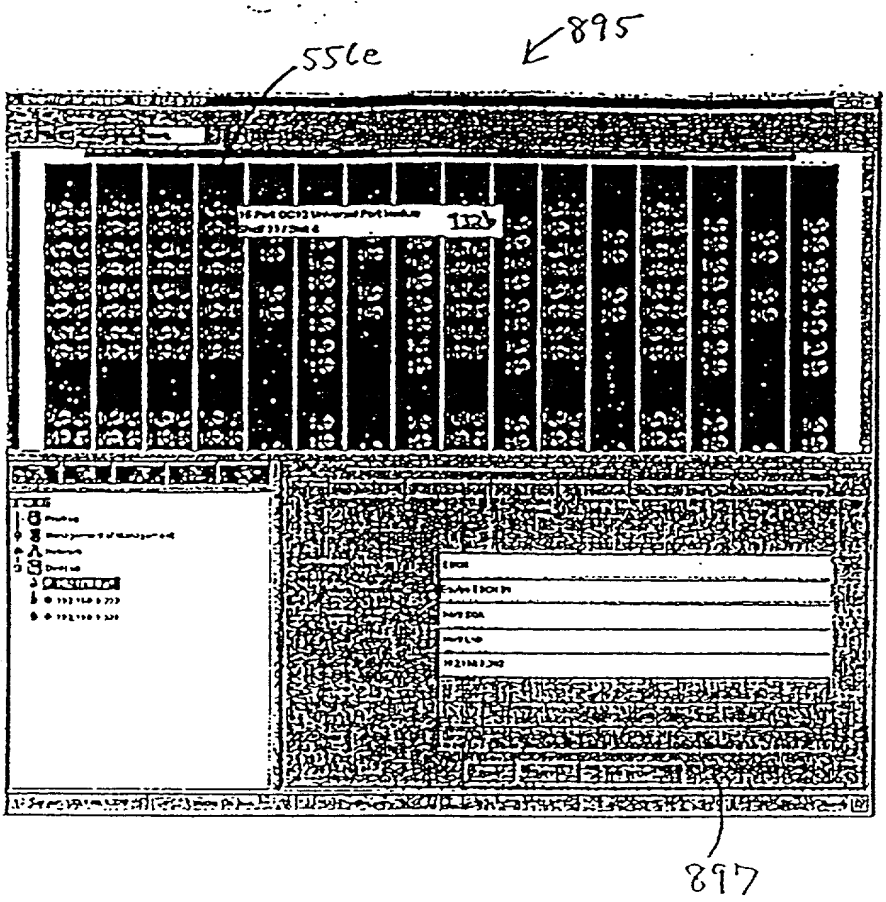


Fig. 4p

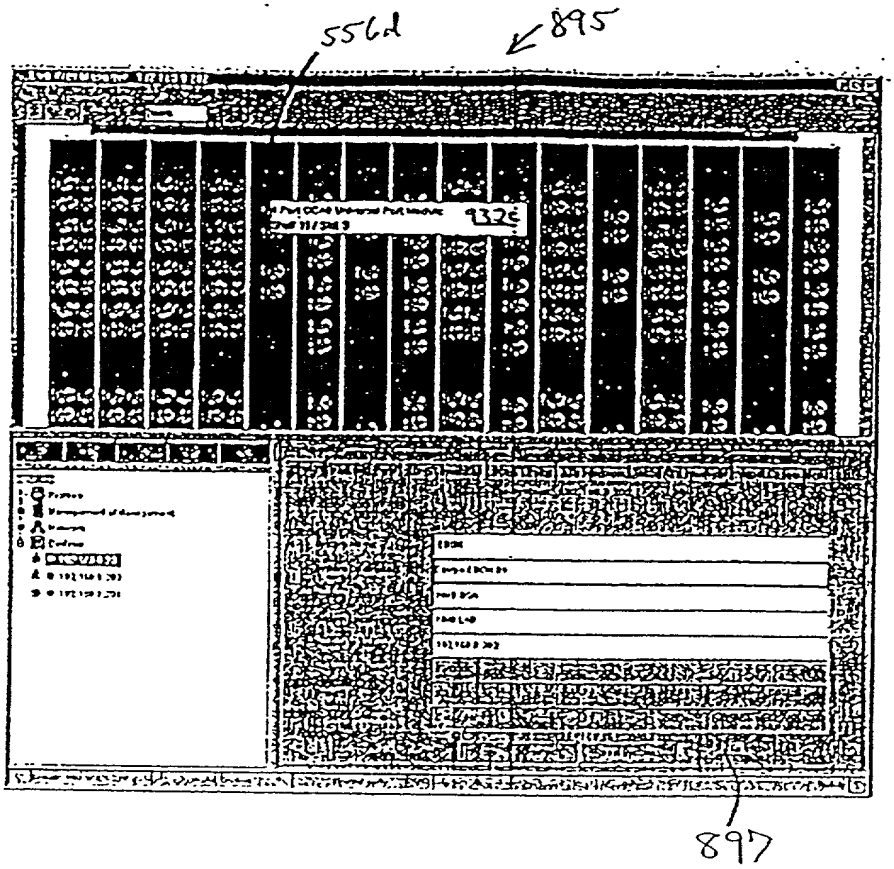


Fig. 4g

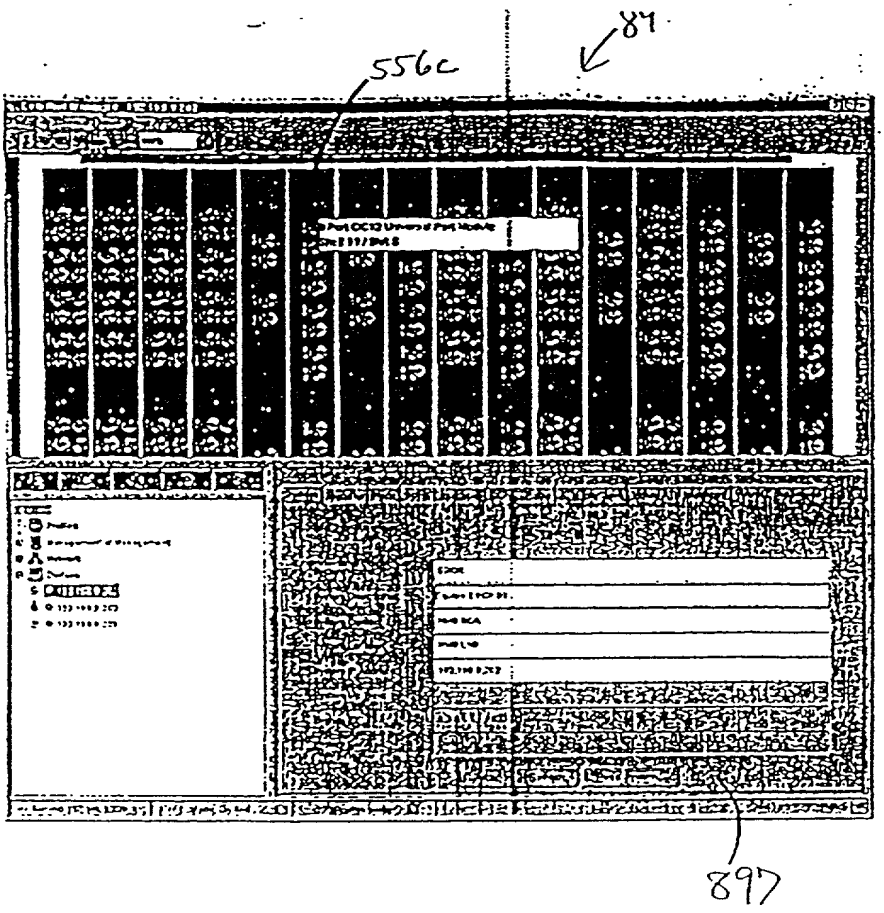


Fig. 41

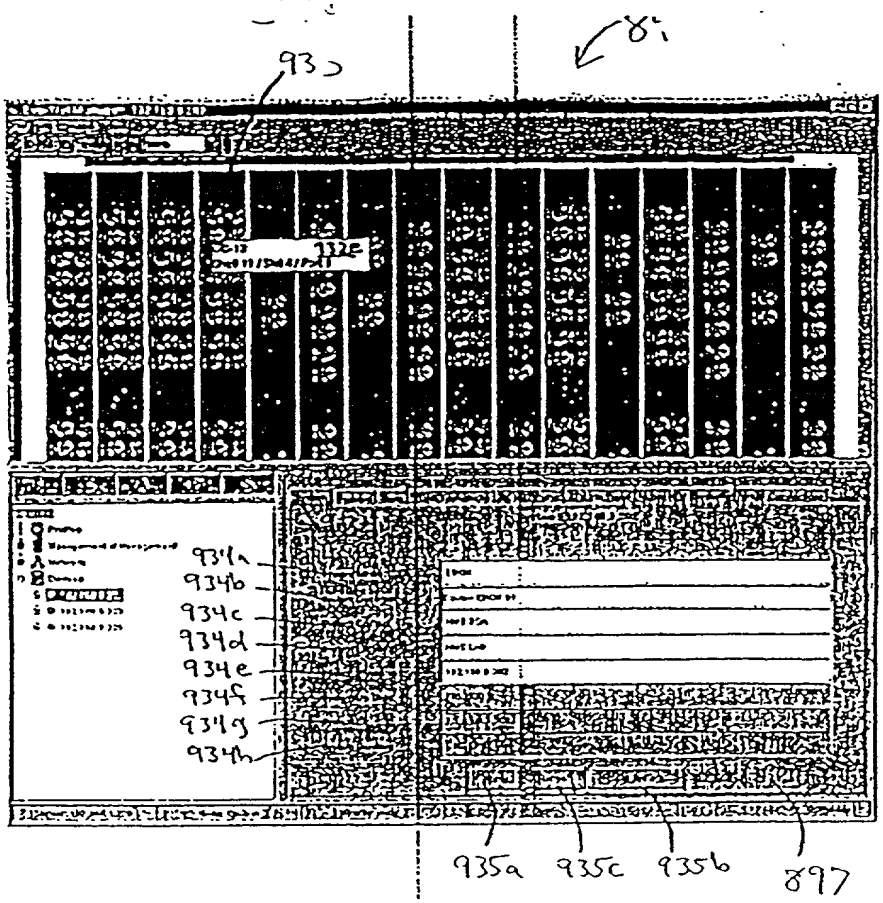

893
891
934a
934b
934c
934d
934e
934f
934g
934h
935a
935c
935b
897

Fig. 4s

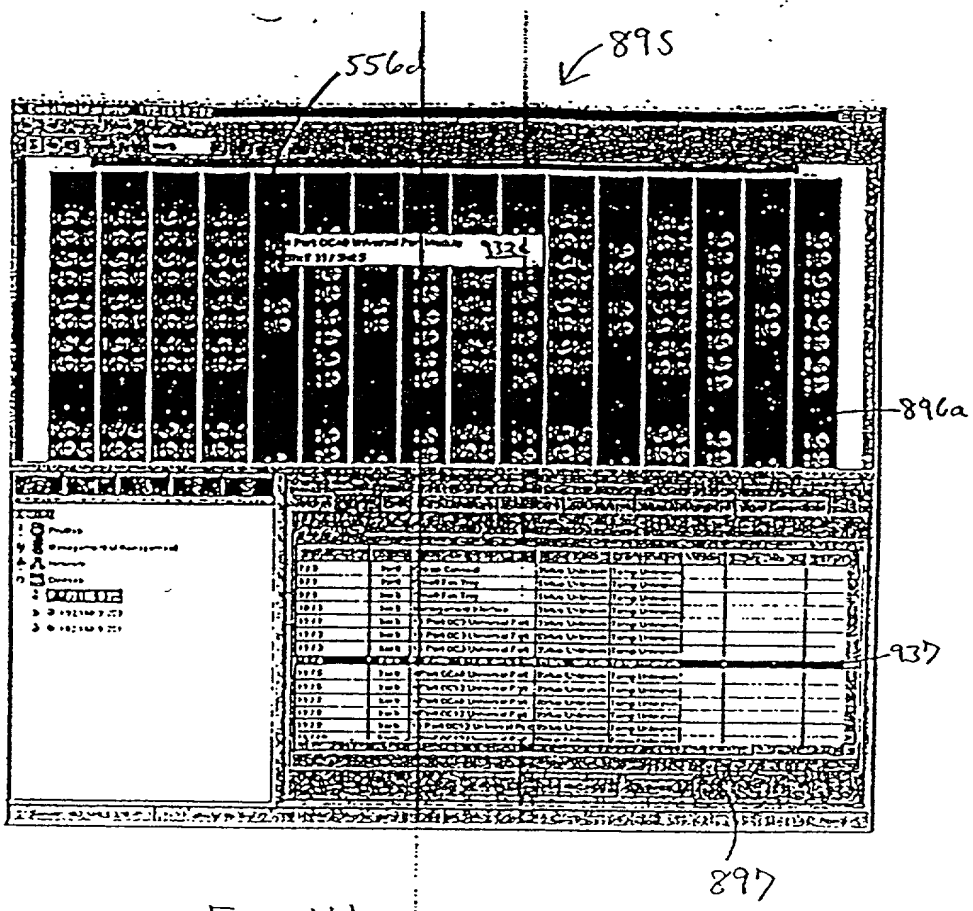


Fig. 4f

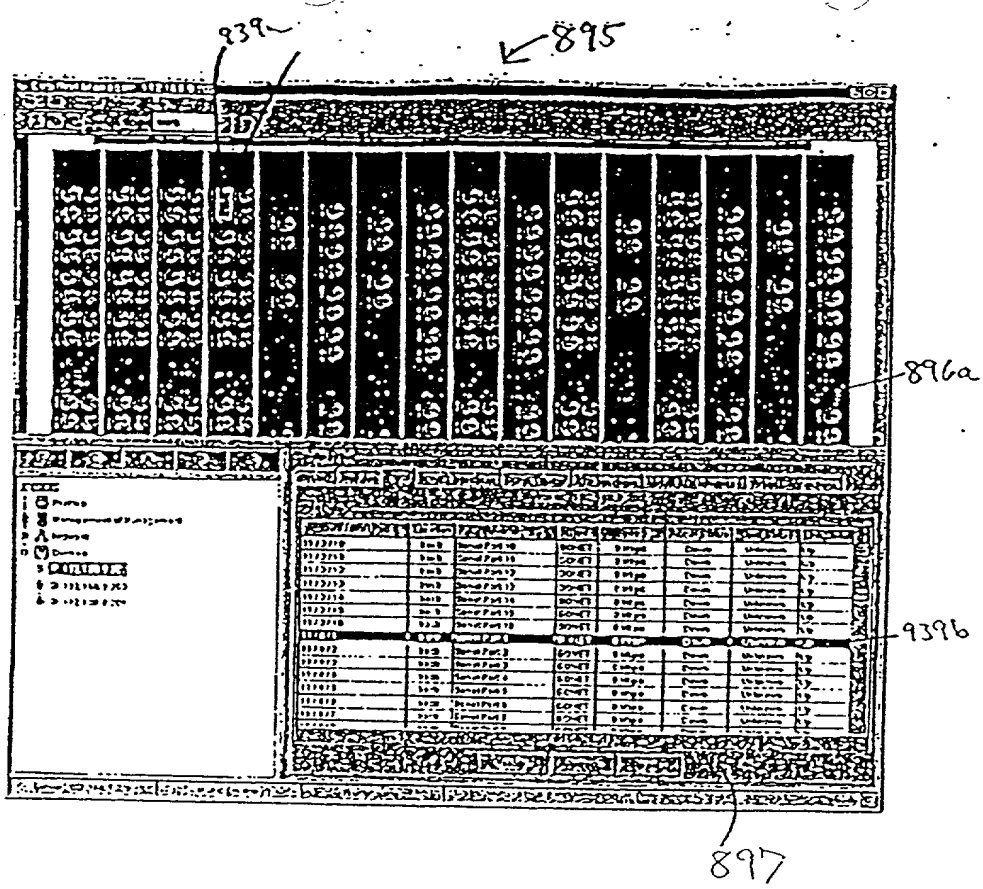


Fig. 4u

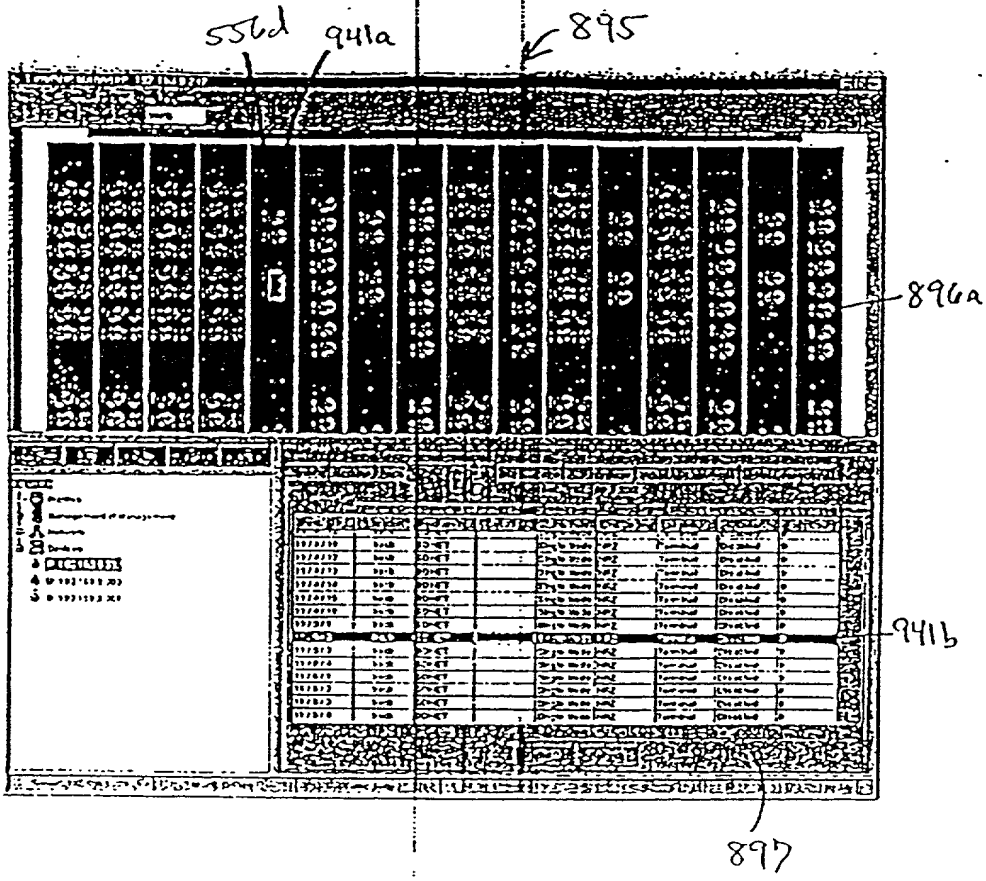


Fig. 41v

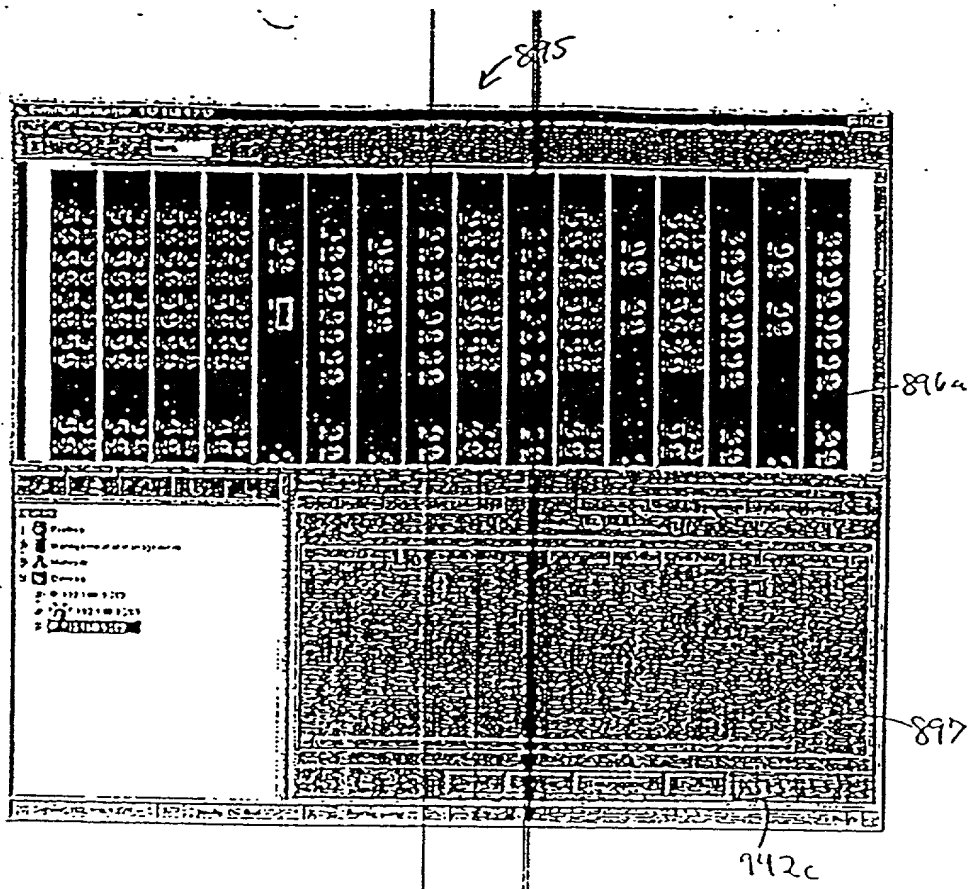


Fig. 4W

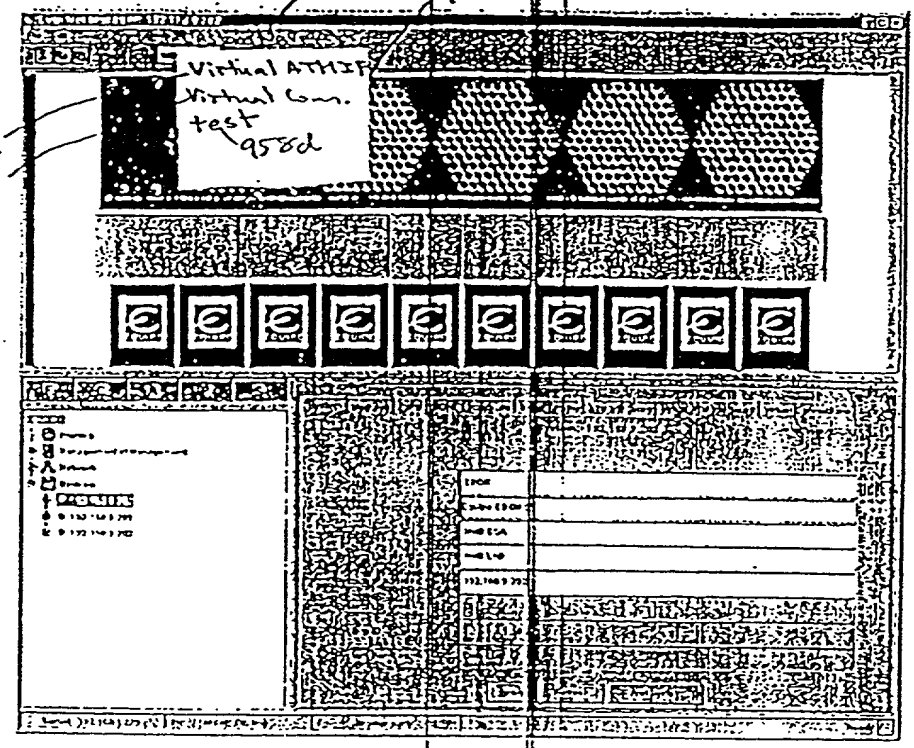


Fig. 11X

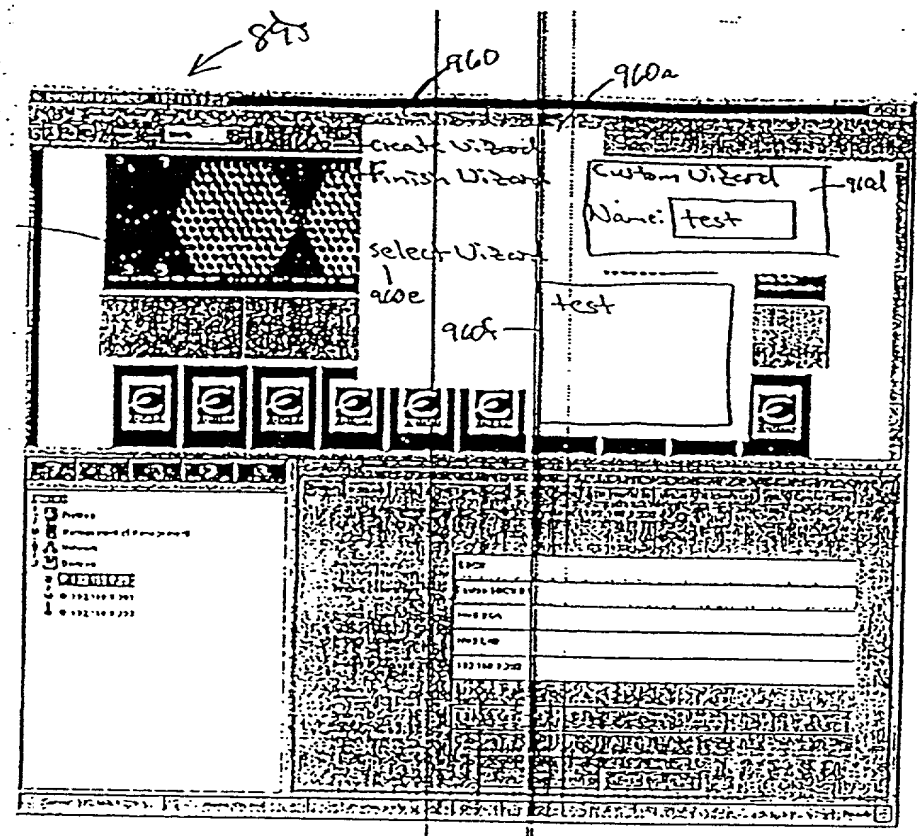

895
960
960a
960b
960c
960d
960e
960f
Create Wizard
Finish Wizard
Select Wizard
Custom Wizard
Name:
test
test

Fig. 4Y

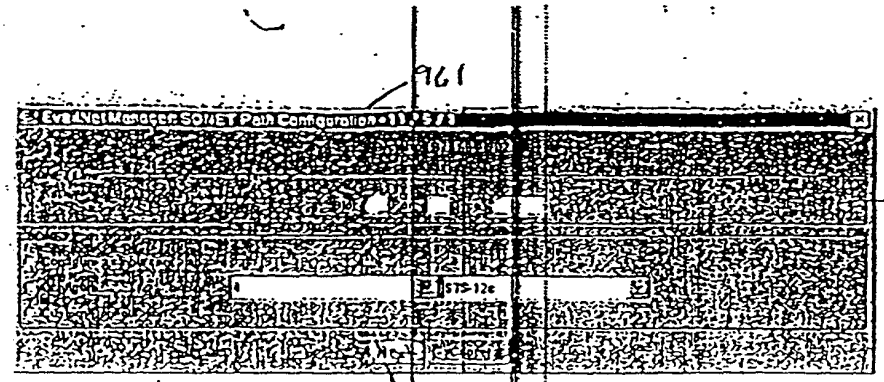


Fig. 4E

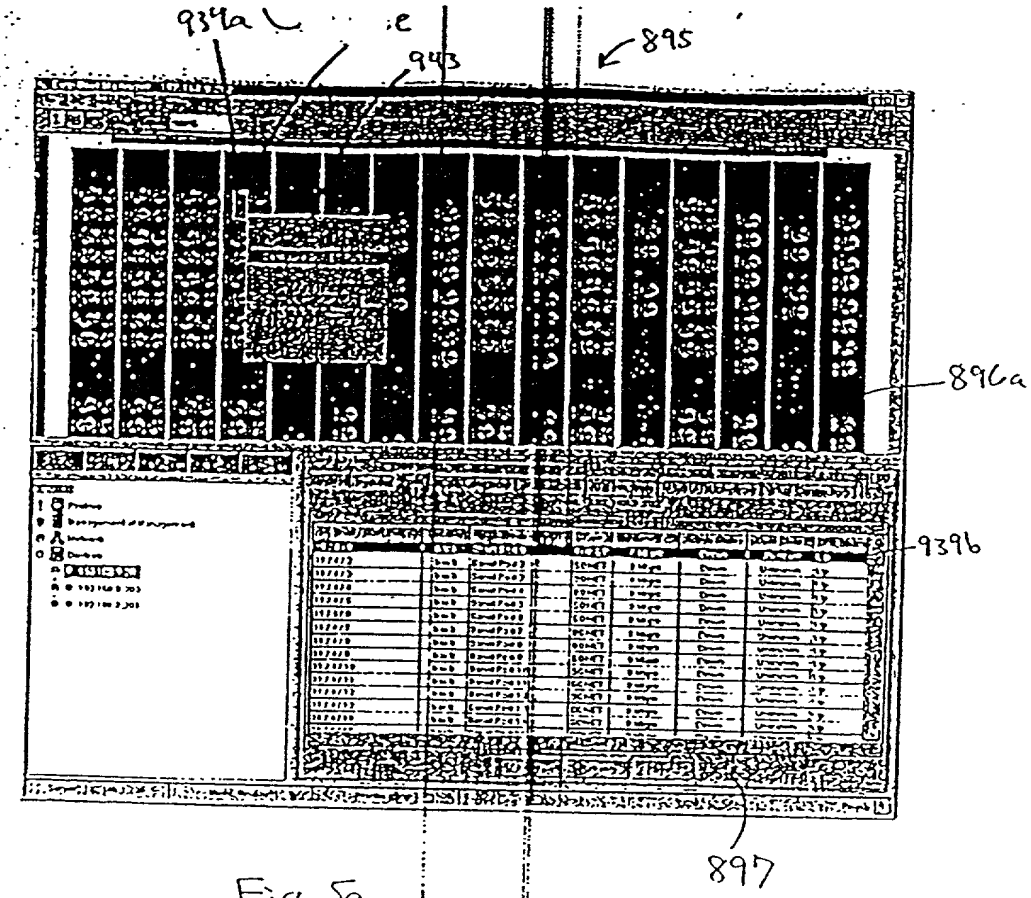


Fig. 5a

Fig. 5b

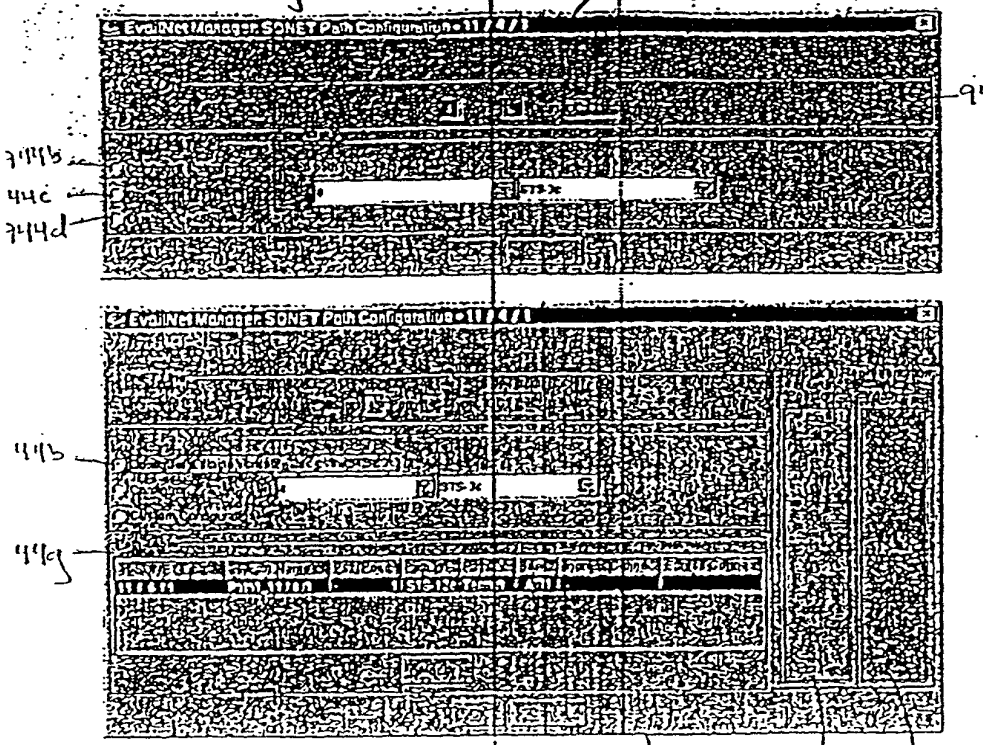


Fig. 5c

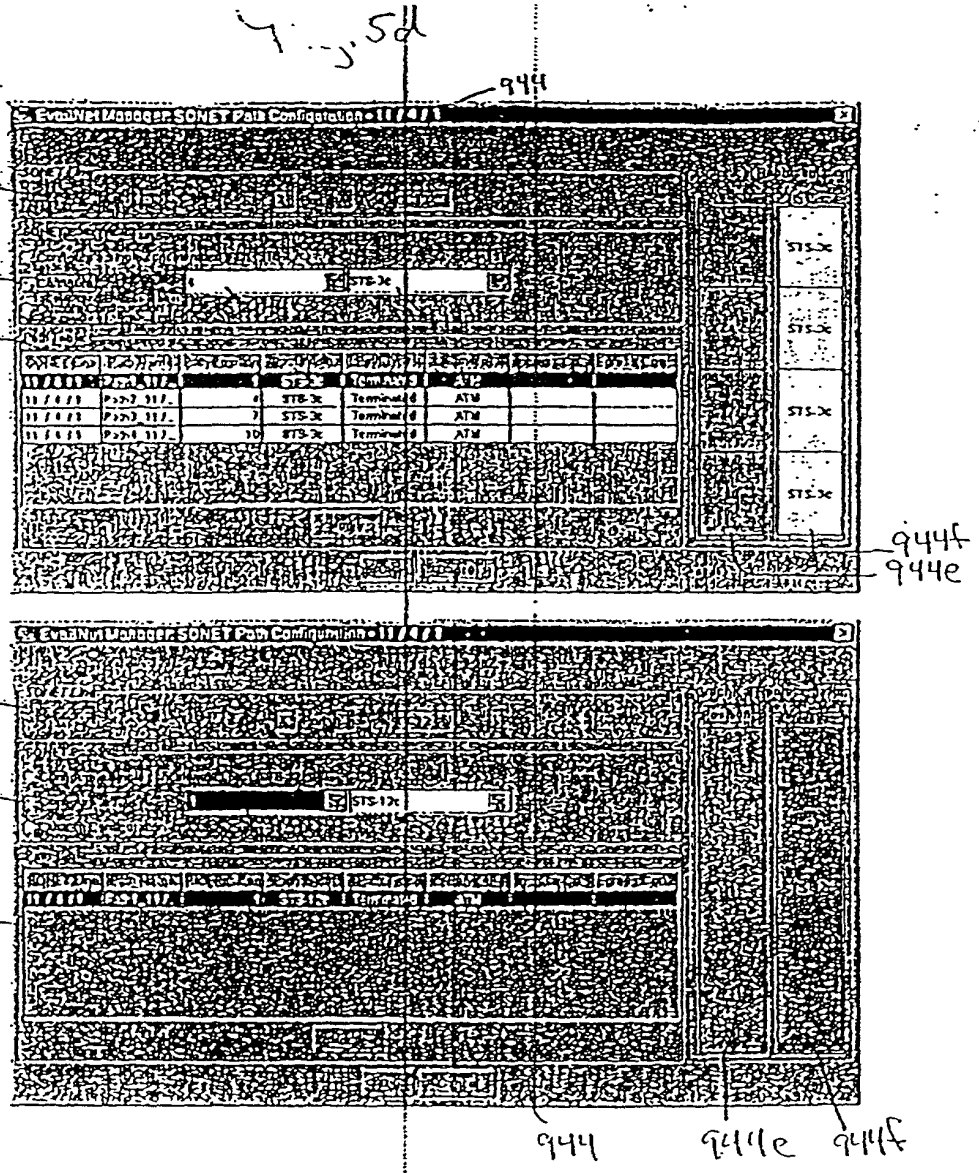
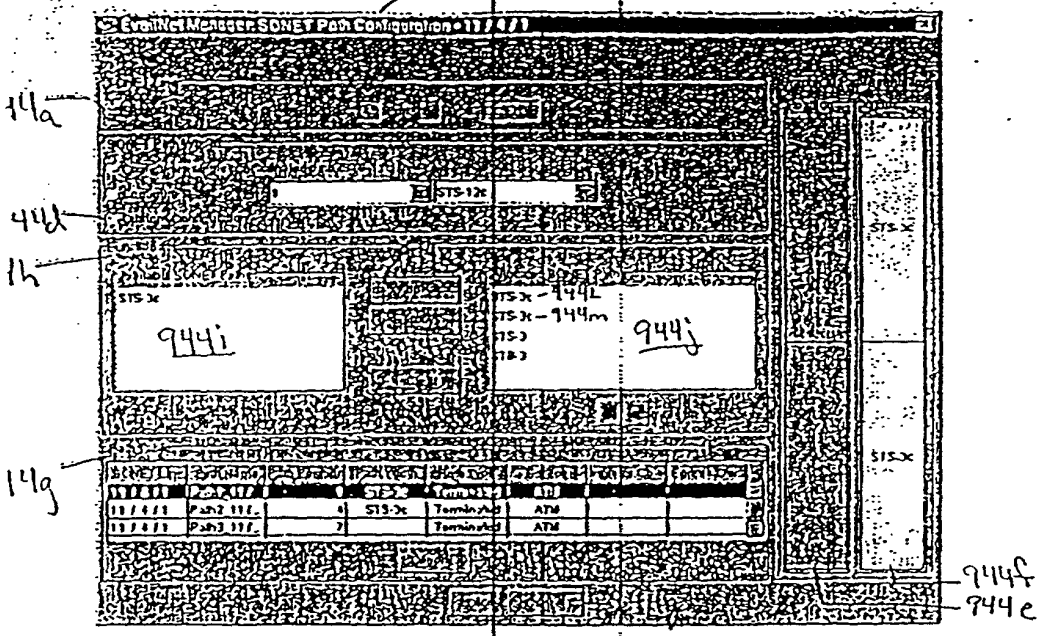


Fig. 5e

Fig. 5f



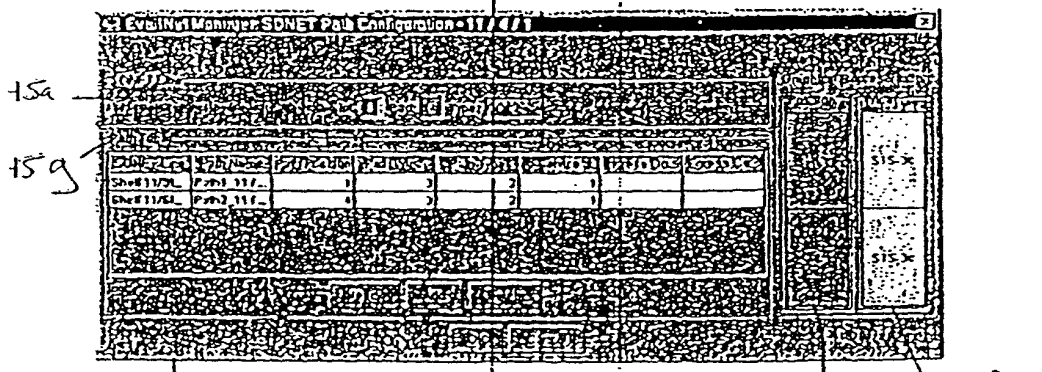


Fig. 5g

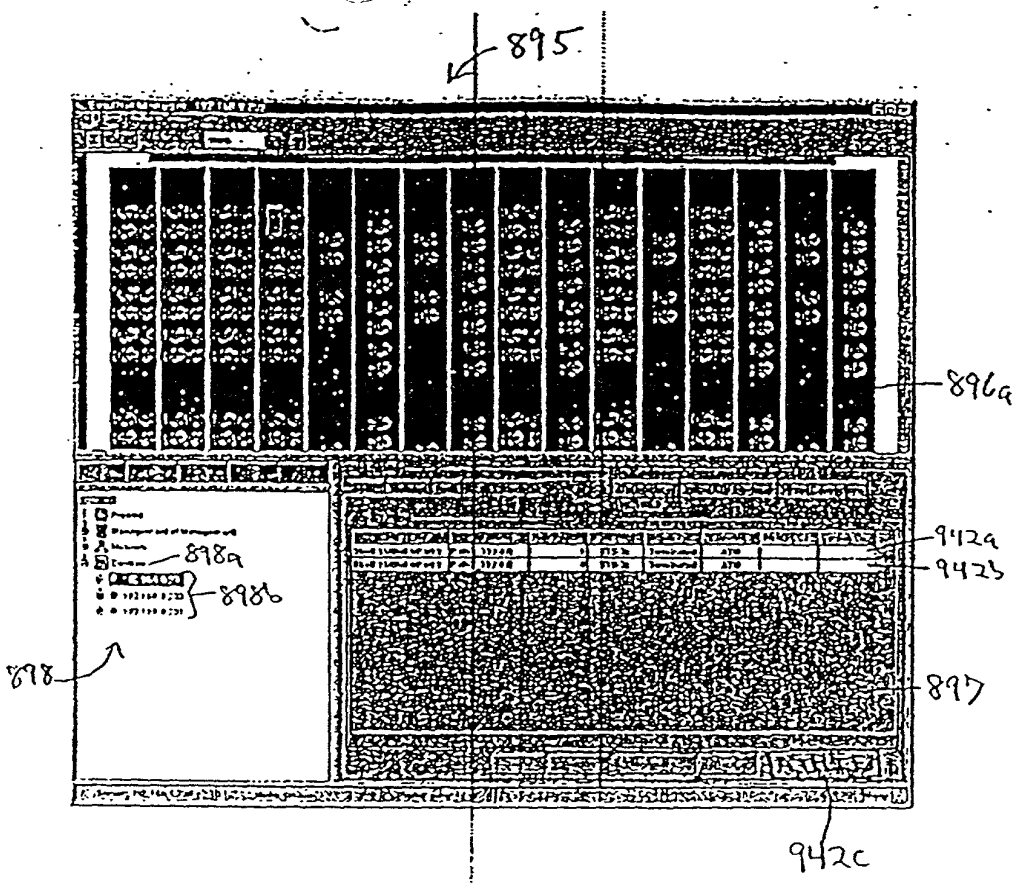


Fig. 5h

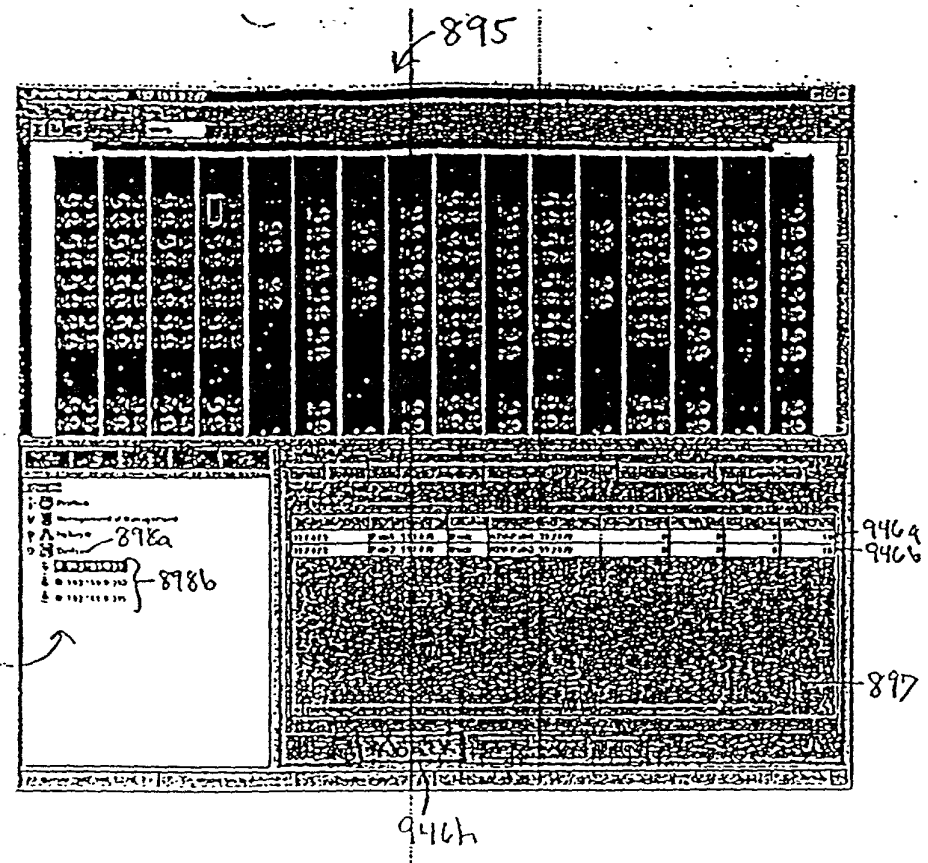


Fig. 5i

Fig.5j

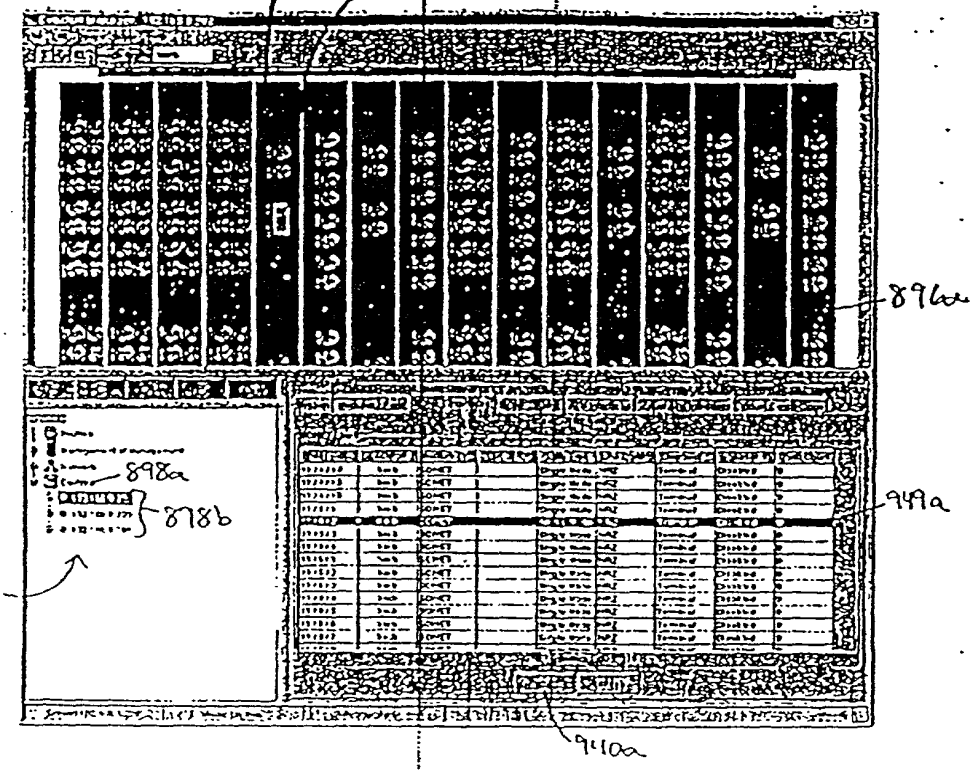

556d
941a
895
896a
898a
878b
898
949a
940a

Fig.5K

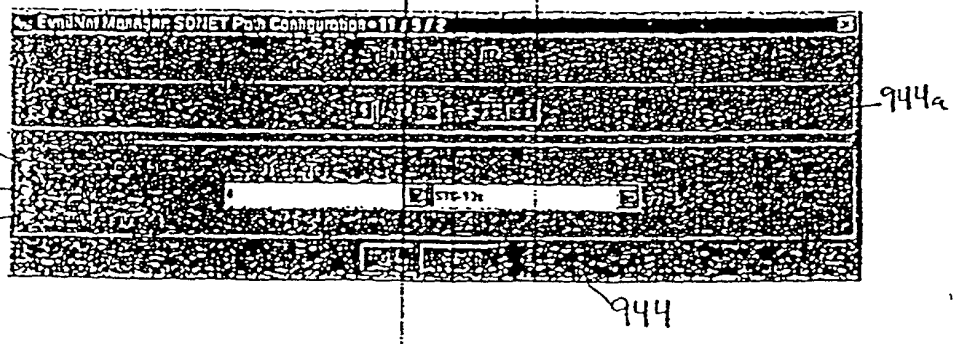

944a
944b
944c
944d
944

Fig. 5l

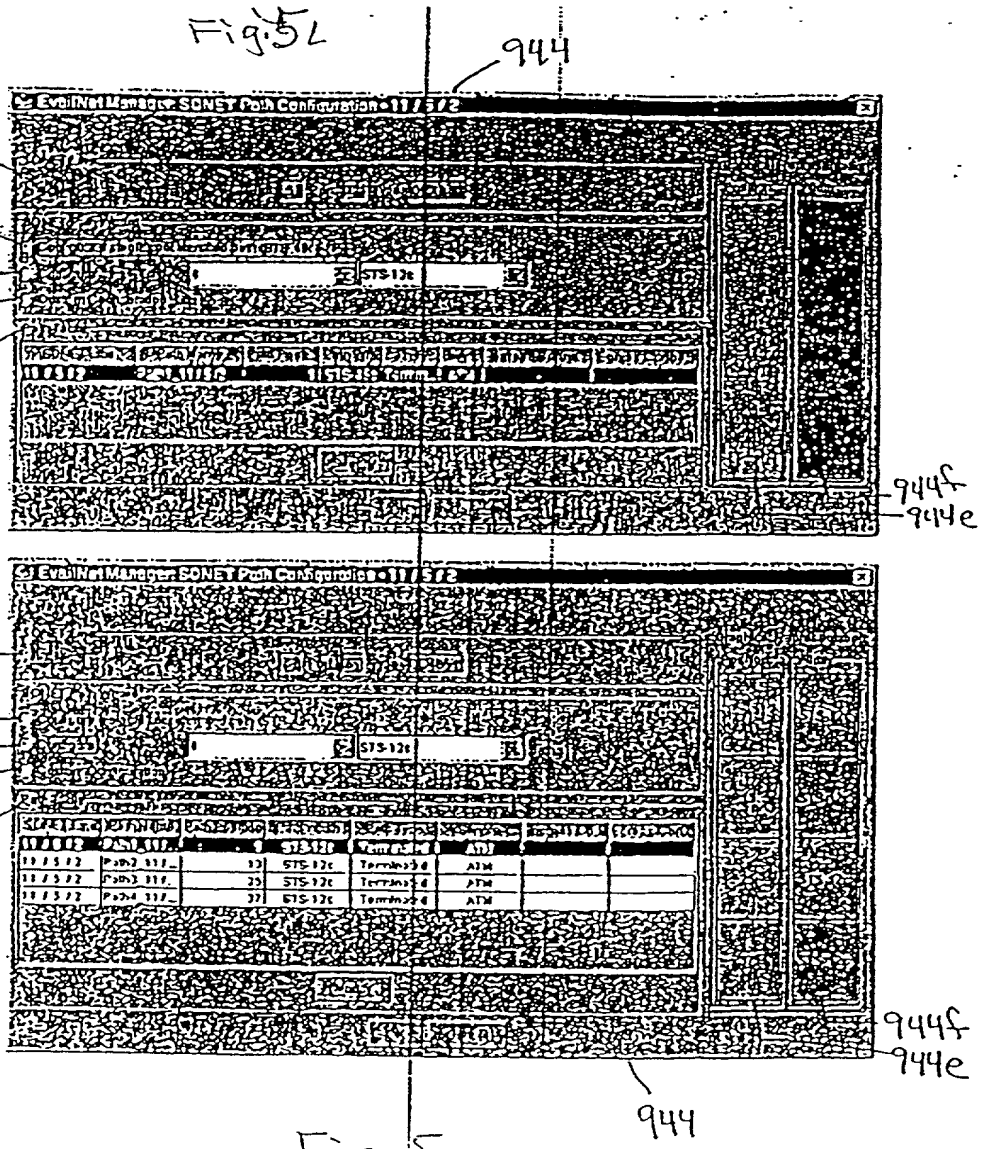

944
944a
944b
944c
944d
944g
944f
944e
944a
944b
944c
944d
944g
944f
944e
944

Fig. 5m

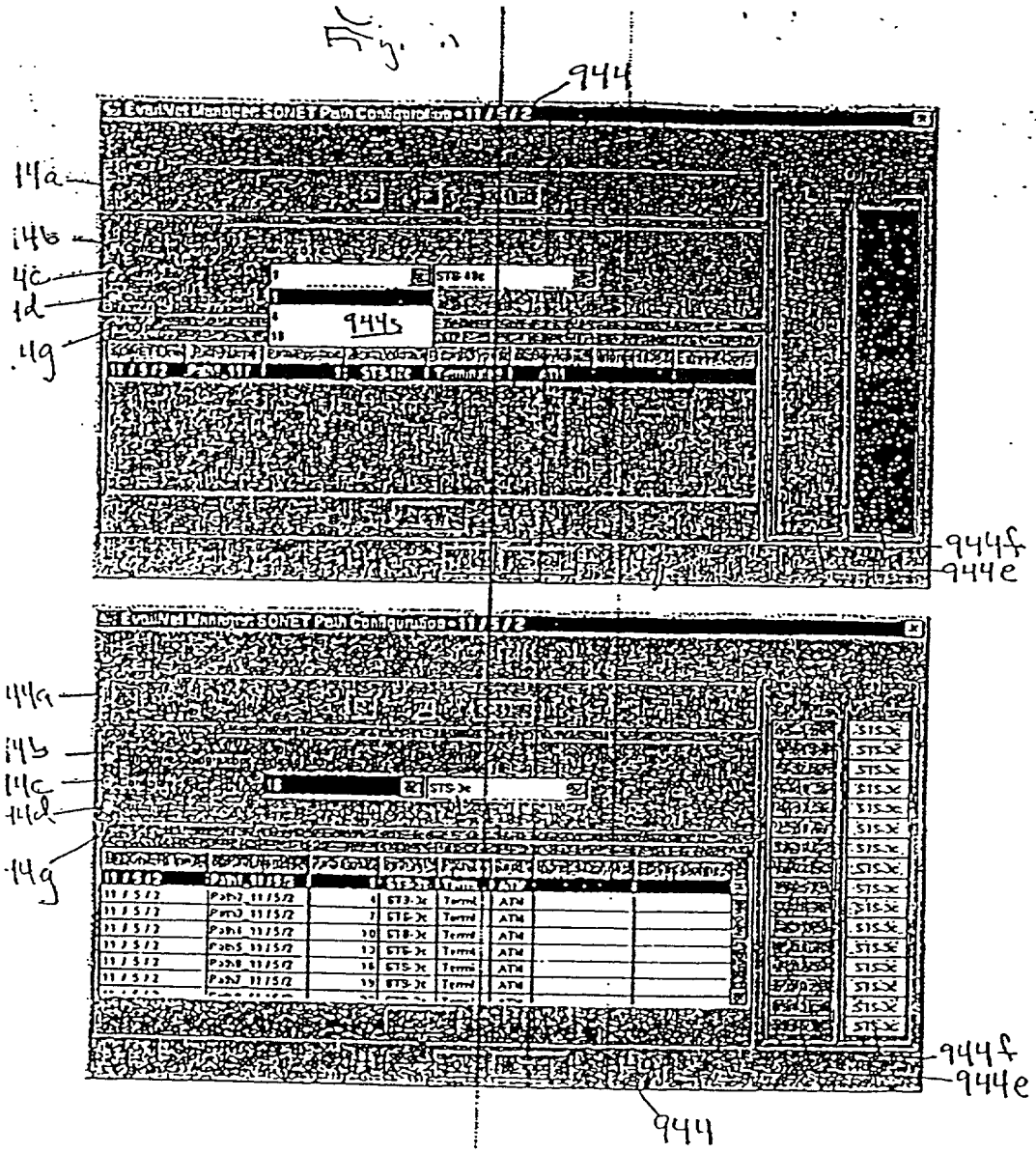

944
14a
14b
14c
14d
14g
9445
944f
944e
14a
14b
14c
14d
14g
944f
944e
944

Fig. 5D

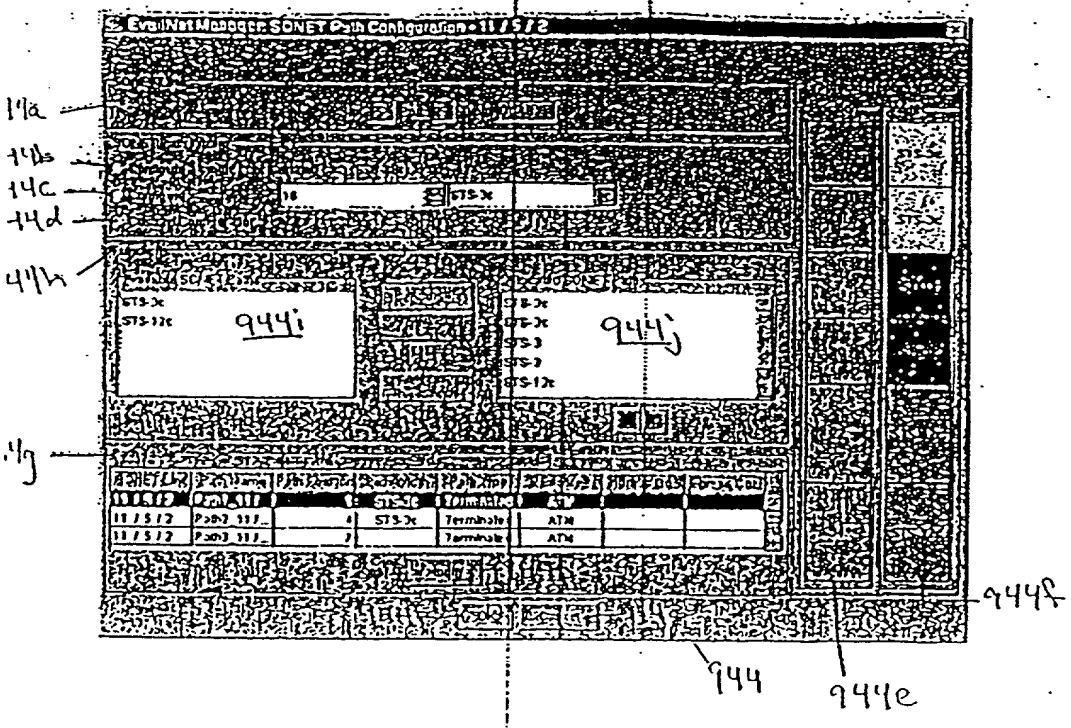

EvenNet Manager SONET Path Configuration - 11/5/2
STS-3c
STS-12c
STS-3c
STS-12c
STS-3
STS-1
STS-12c
11/5/2
Terminate
ATM
11/5/2
Terminate
ATM
944i
944j
944f
944
944e

Fig. 5P

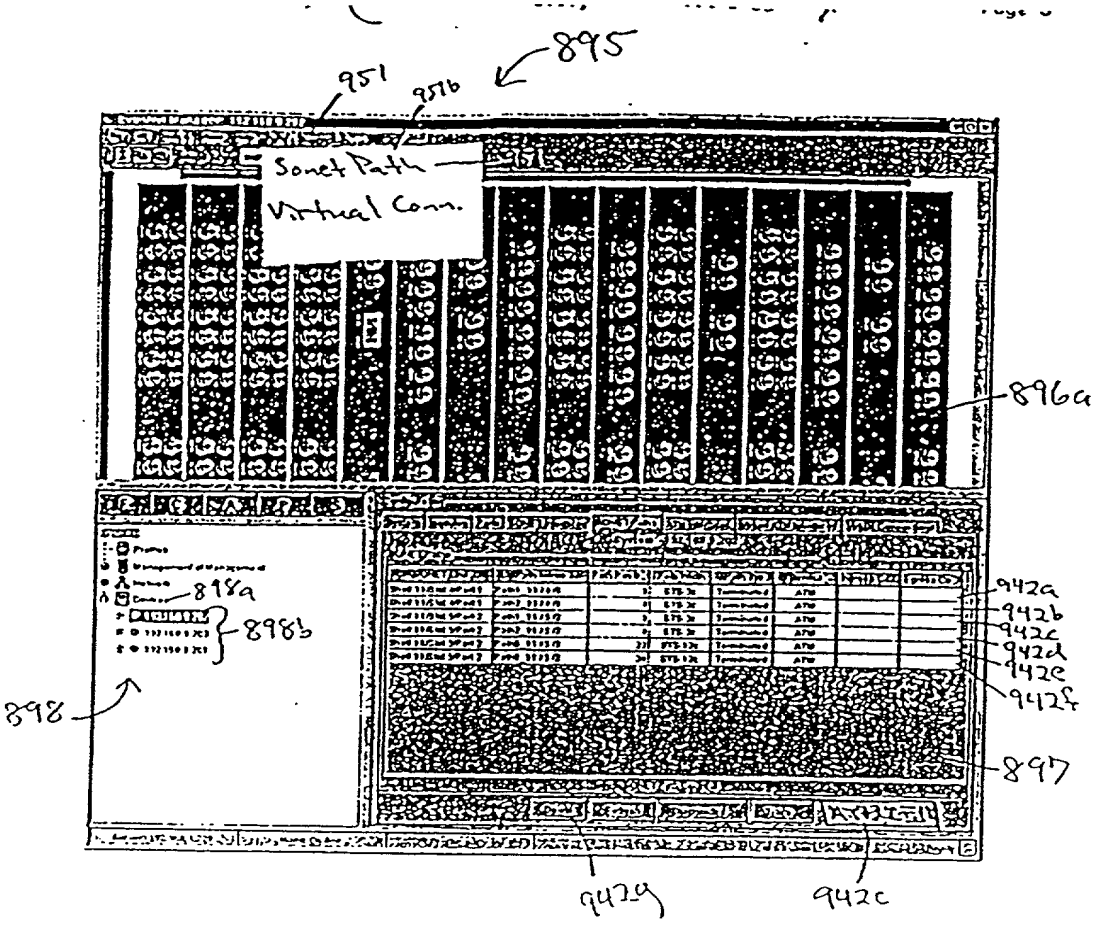

895
951
951b
Sonet Path
Virtual Conn.
896a
898a
898b
898
942a
942b
942c
942d
942e
942f
897
942g
942c

Fig. 5g

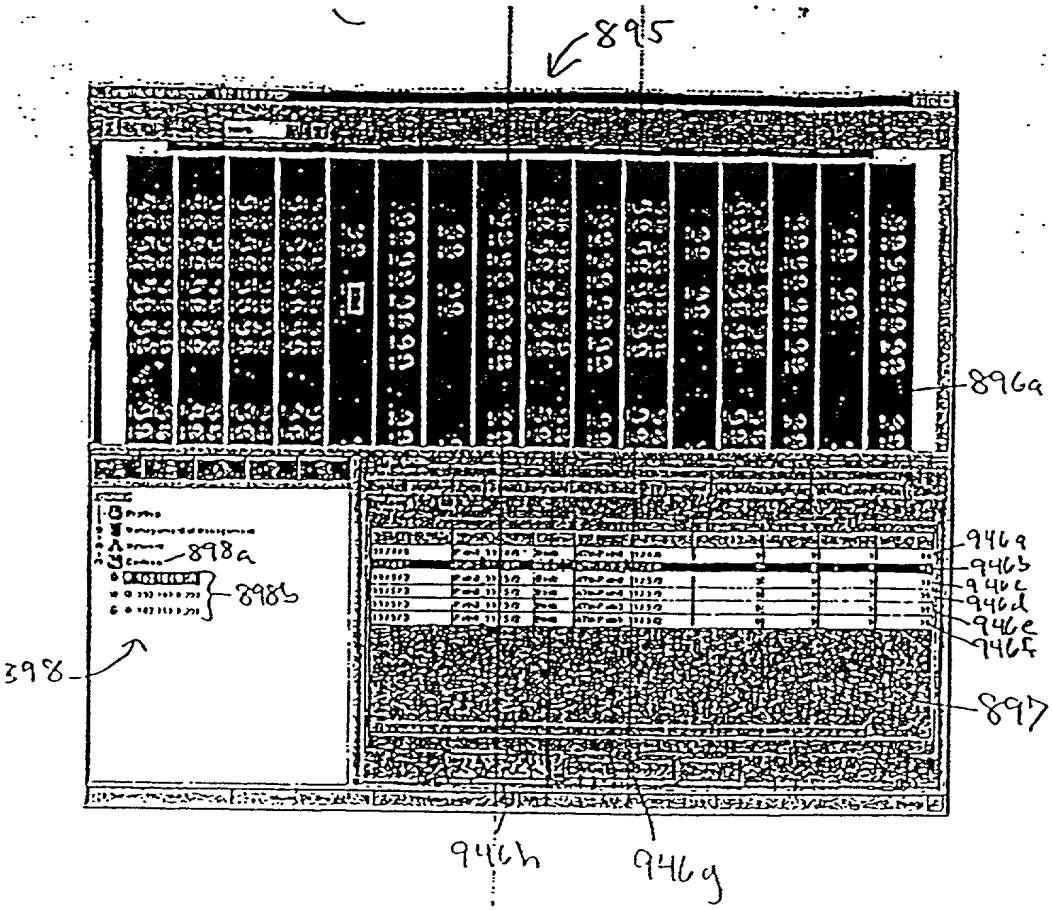

895
896a
898a
898b
398
946a
946b
946c
946d
946e
946f
897
946h
946g

Fig. 5F

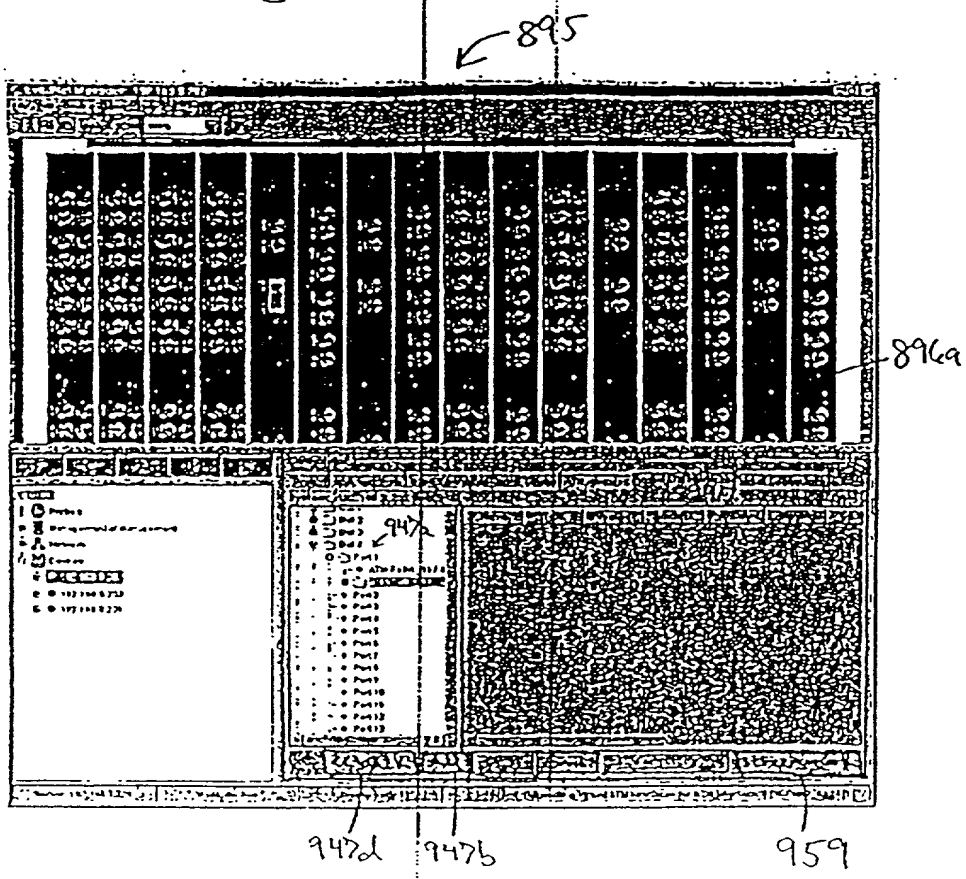
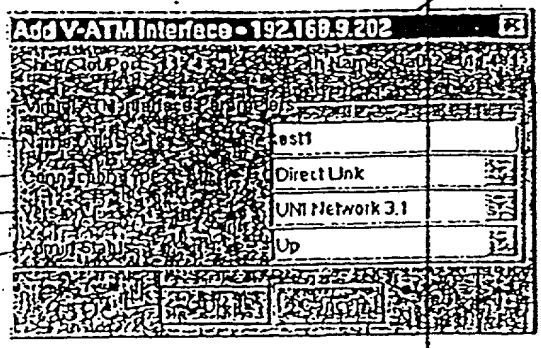


Fig. 5s

Fig. 5b


950
Add V-ATM Interface - 192.168.9.202
test1
Direct Unk
UNI Network 3.1
Up
50d
50a
50b
50c

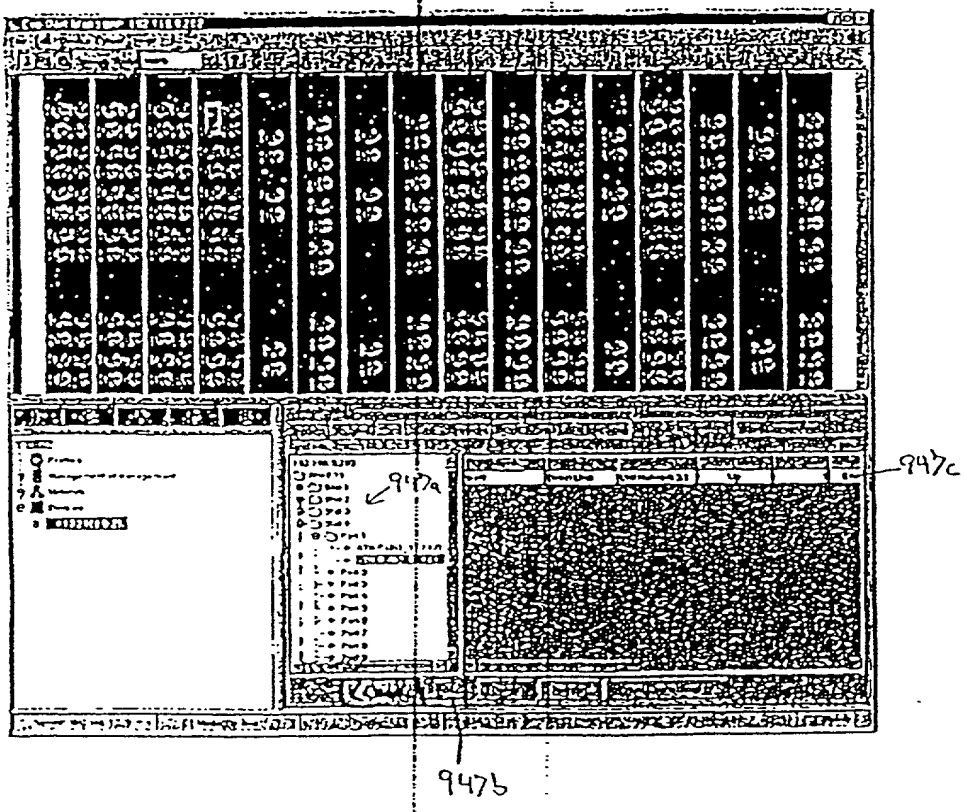

947a
947c
947b

Fig. 5a

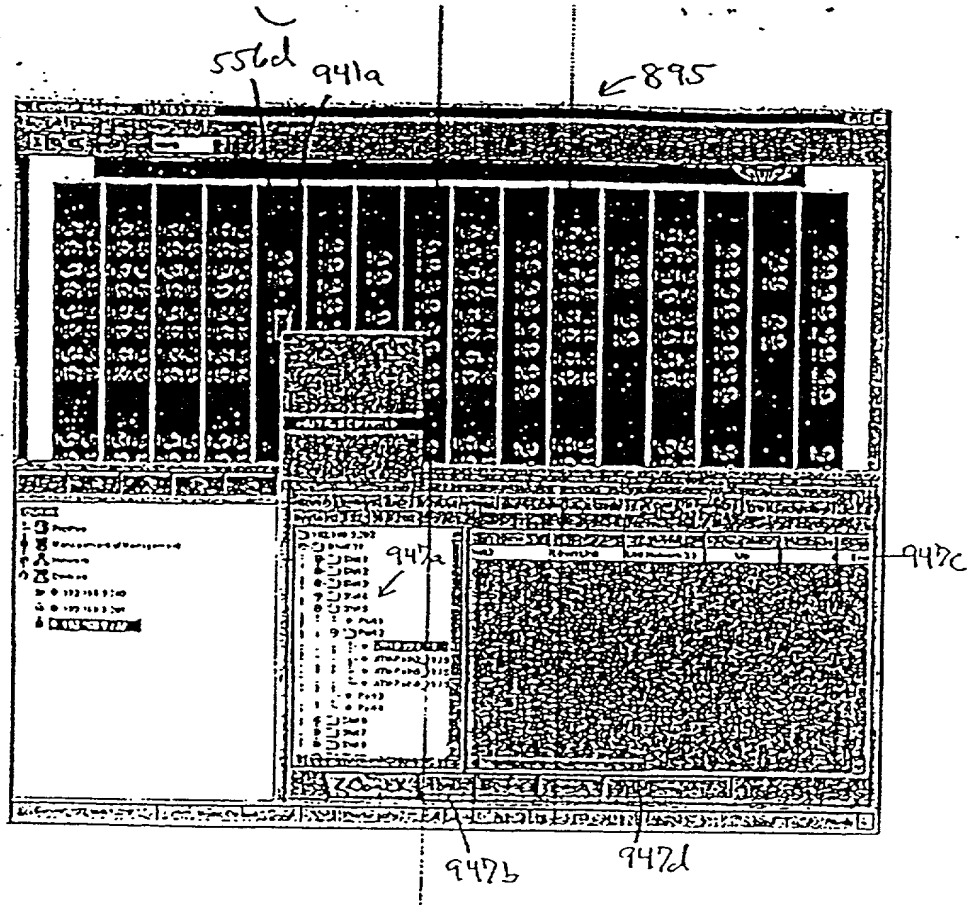


Fig. 5v

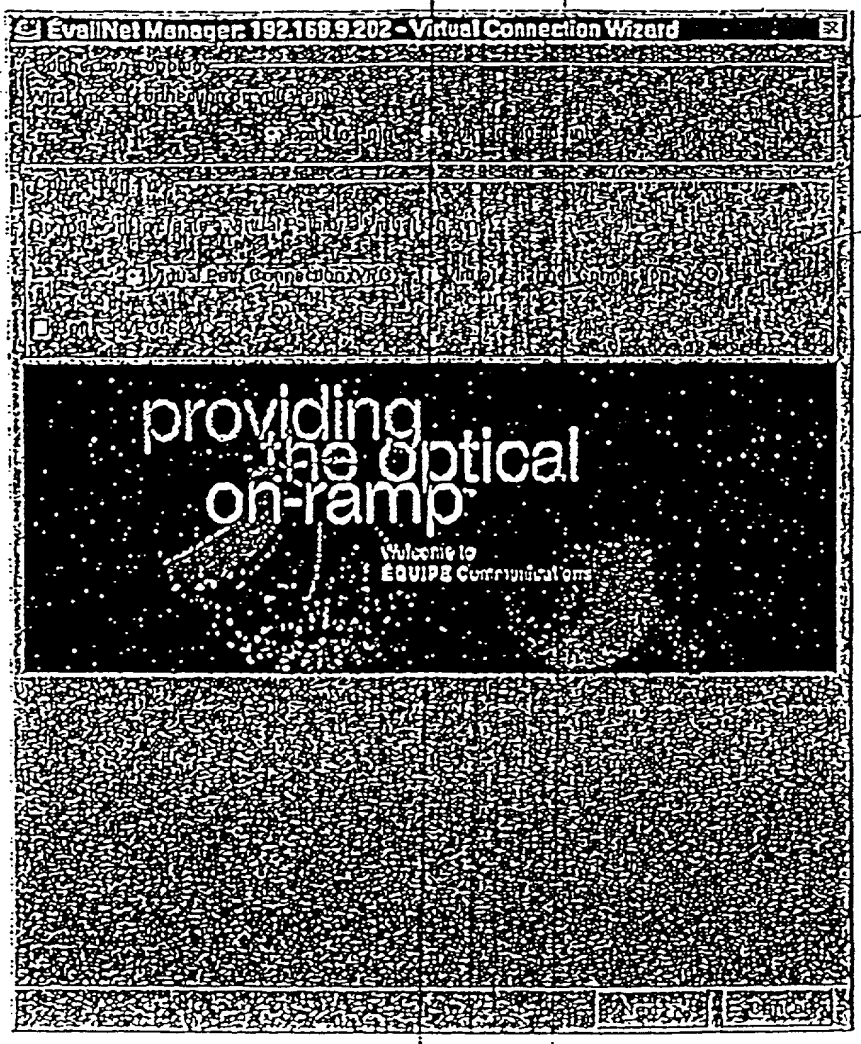

952
EvailNet Manager: 192.168.9.202 - Virtual Connection Wizard
952a
952b
providing the optical on-ramp
Welcome to
EQUIPE Communications

Fig. 5w

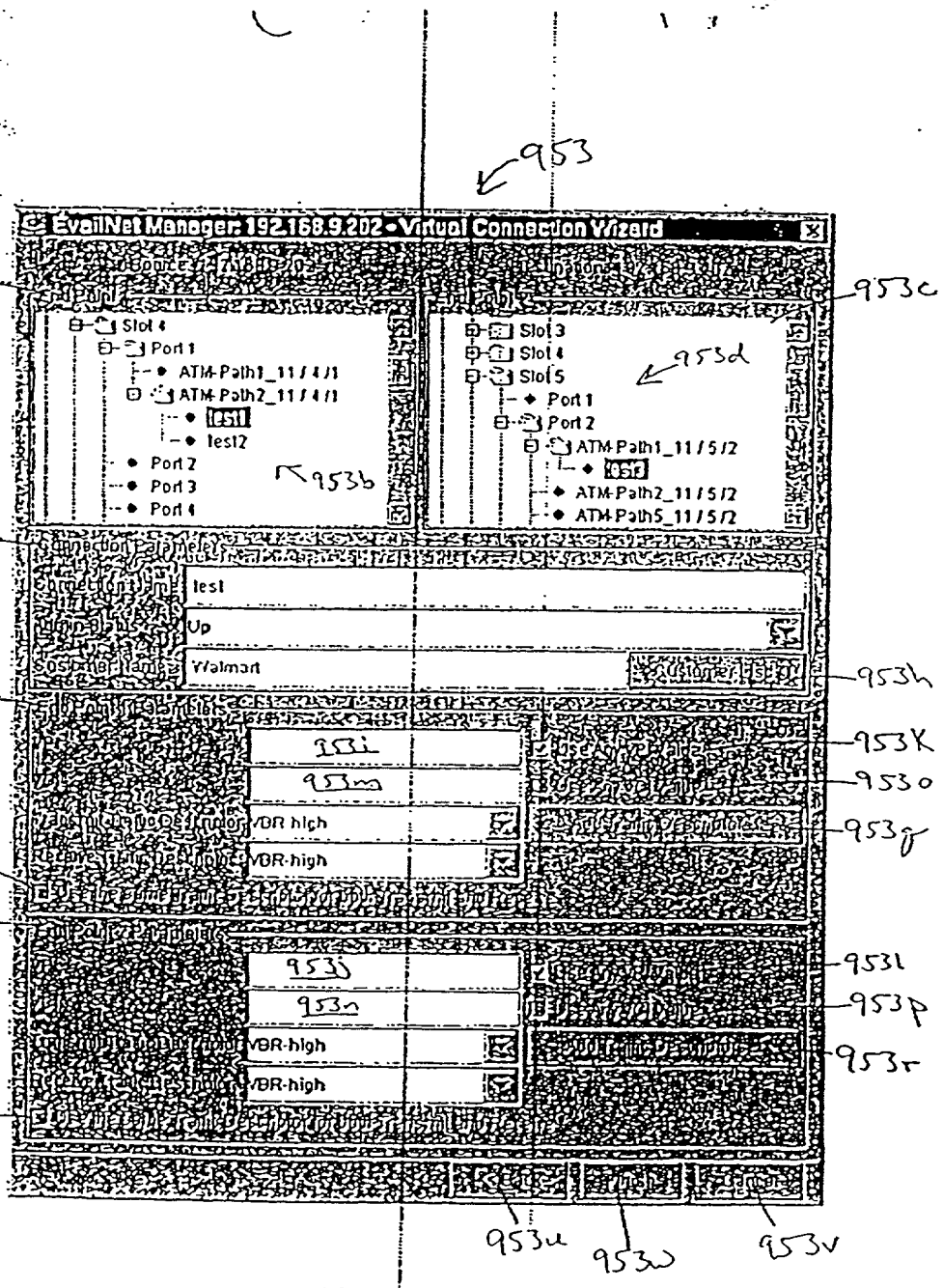

953
EvenNet Manager 192.168.9.202 - Virtual Connection Wizard
Slot 4
Port 1
ATM-Path1_11/4/1
ATM-Path2_11/4/1
test1
test2
Port 2
Port 3
Port 4
953b
953c
Slot 3
Slot 4
Slot 5
953d
Port 1
Port 2
ATM-Path1_11/5/2
953f
ATM-Path2_11/5/2
ATM-Path5_11/5/2
test
Up
Walmart
953h
953i
953k
953m
953o
VBR-high
953g
VBR-high
953j
953l
953n
953p
VBR-high
953r
VBR-high
953u
953w
953v

Fig. 5X

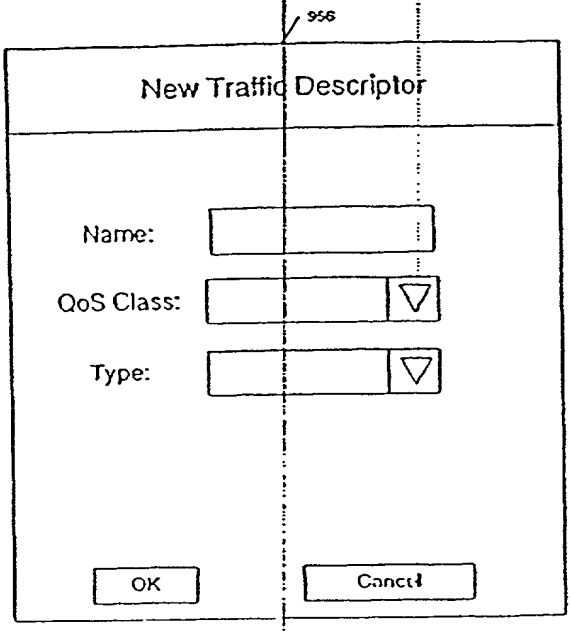


Fig. 5Y

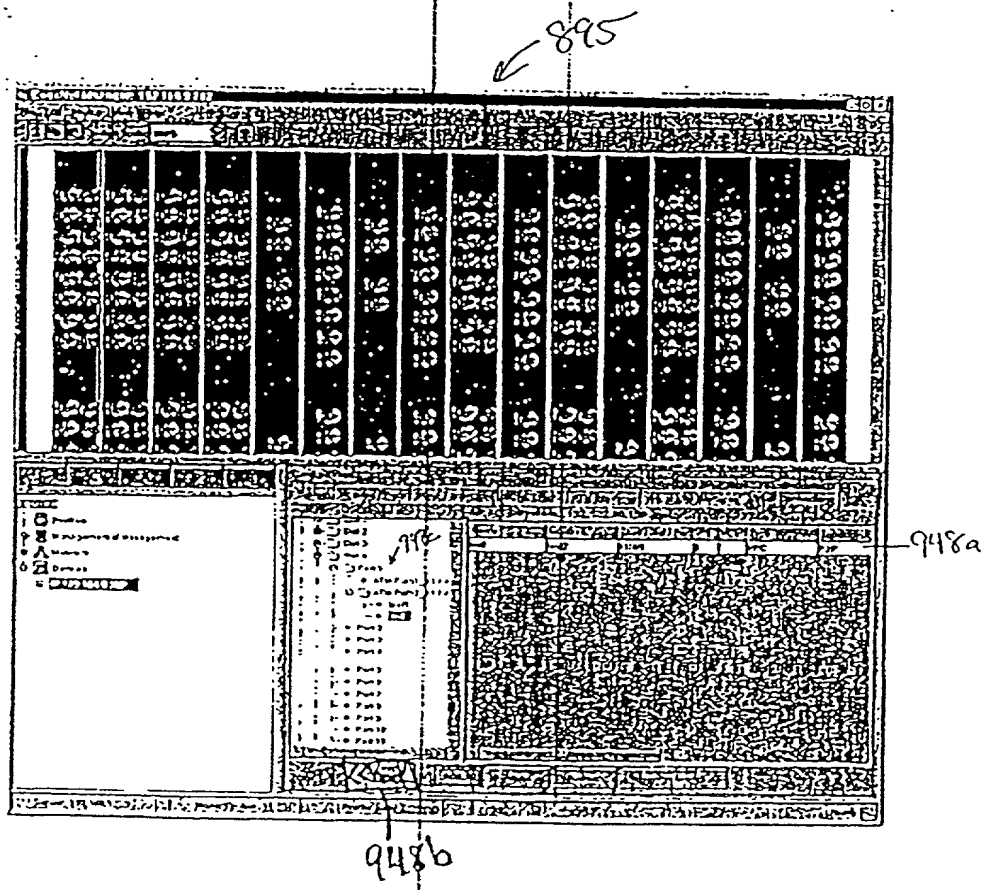


Fig. 57

EQUIPE EXHIBIT 1008

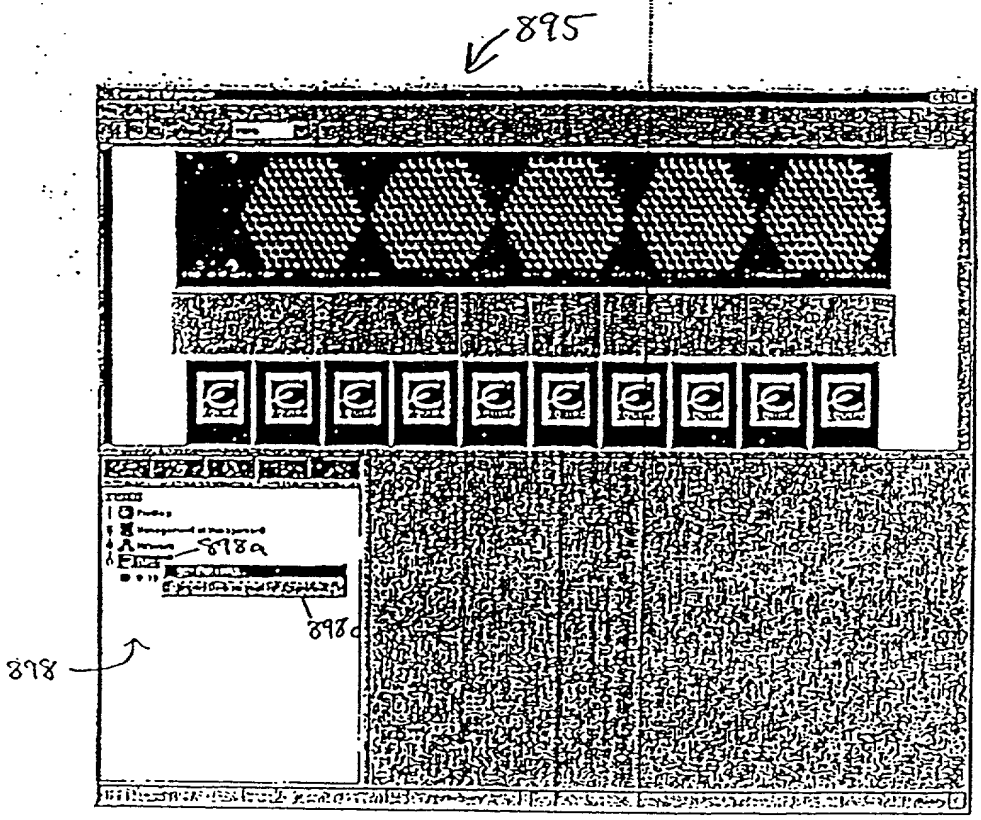


Fig. 6a

Fig. 6b

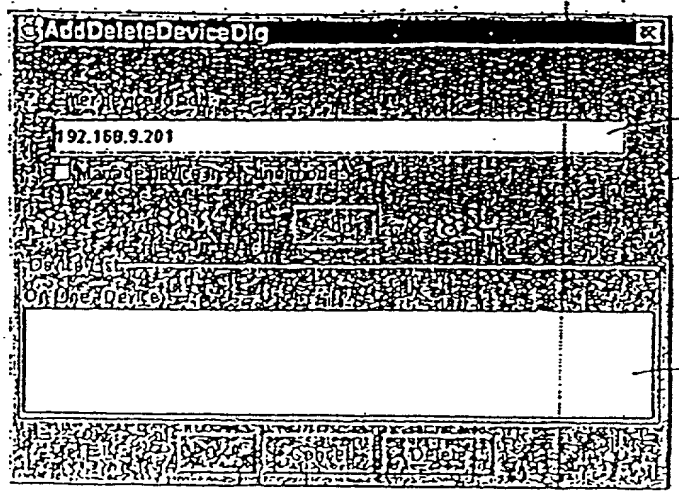
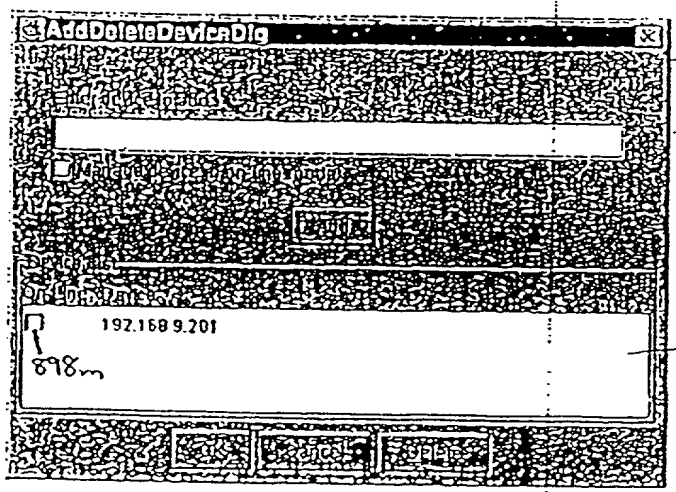

AddDeleteDeviceDlg
192.168.9.201
898e
898d
898g

Fig. 6c


AddDeleteDeviceDlg
192.168.9.201
898m
898d
898g

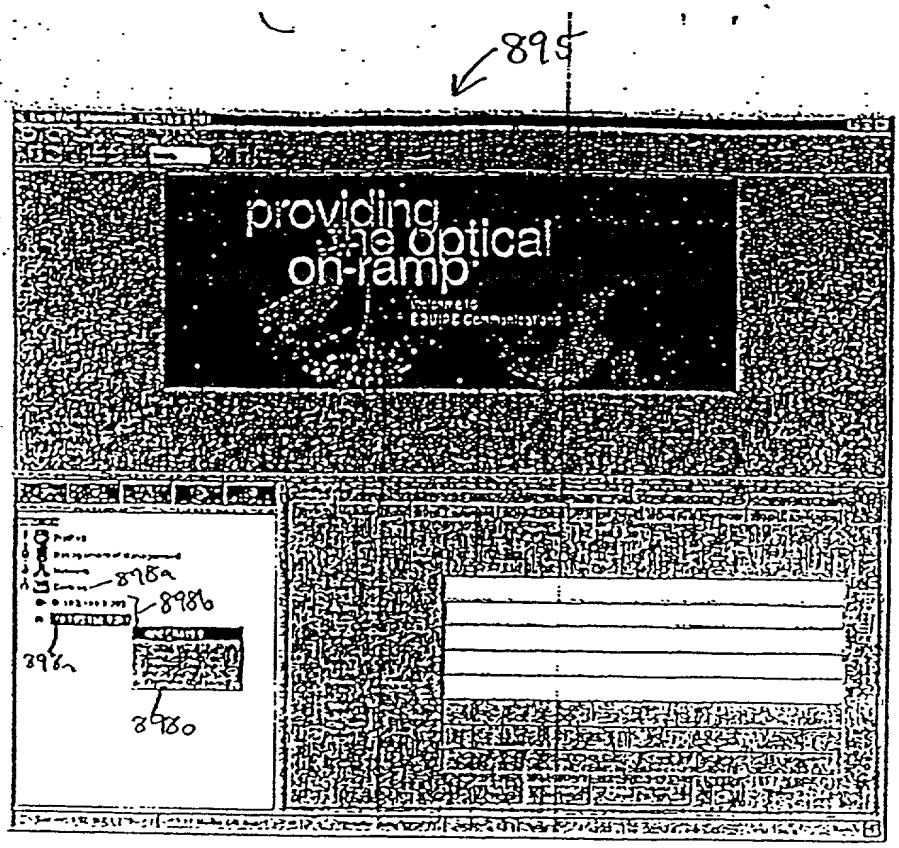


Fig. 6d

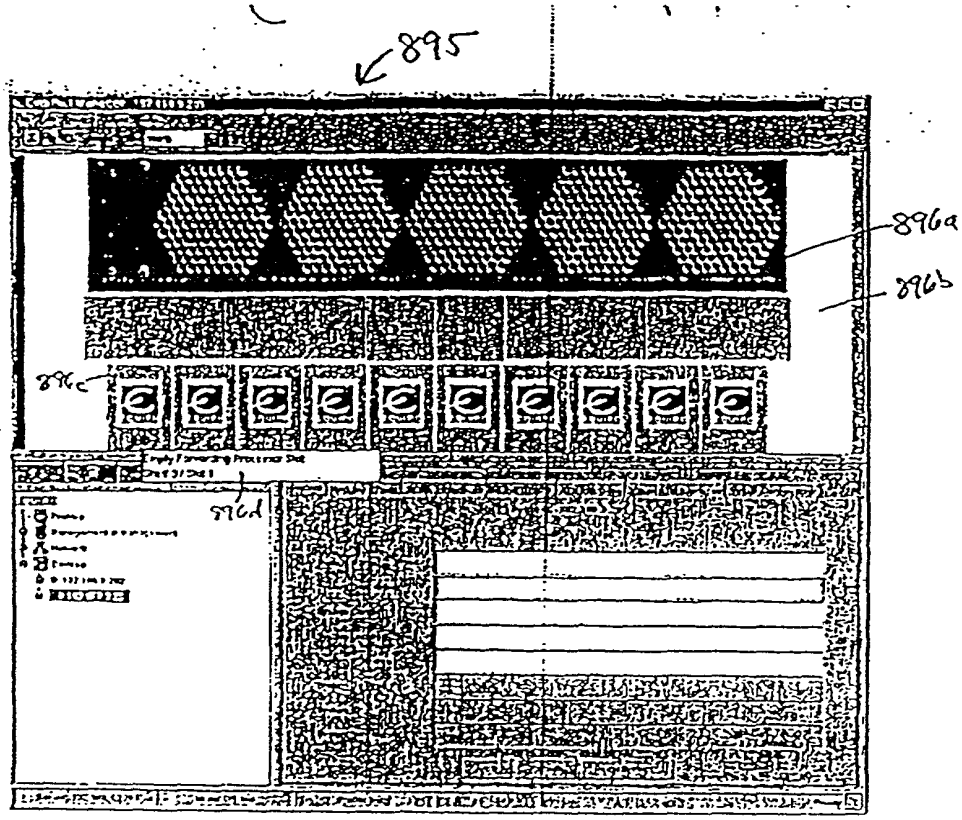


Fig. 6e

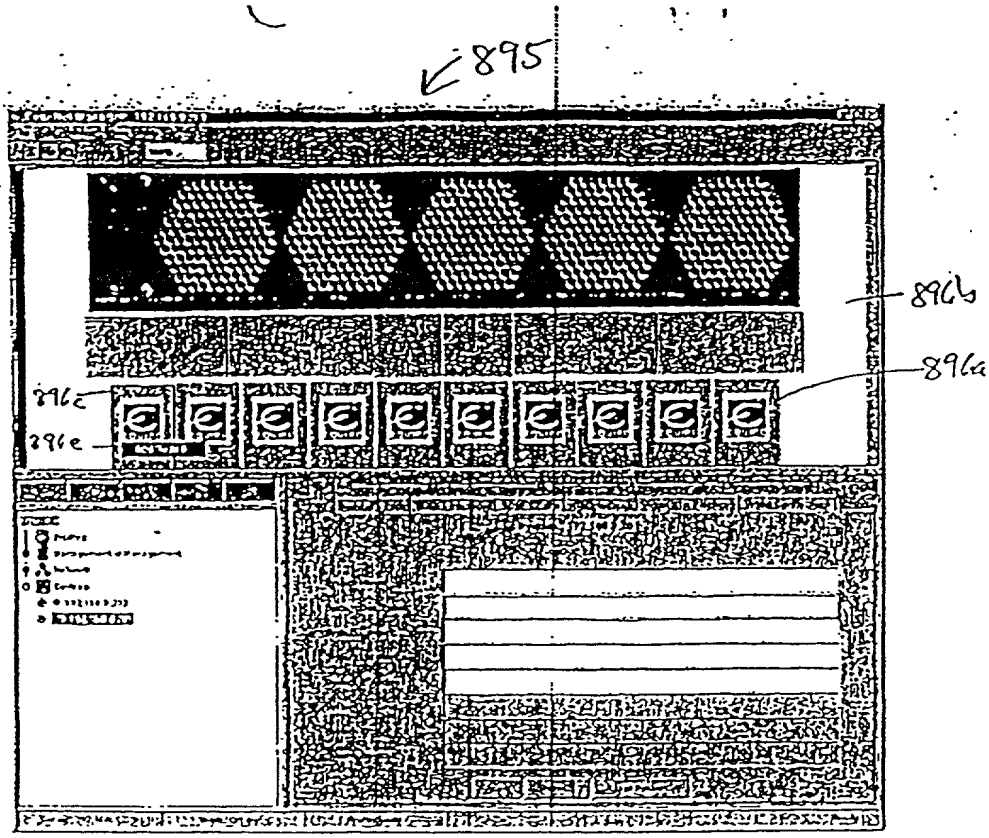


Fig. 6f

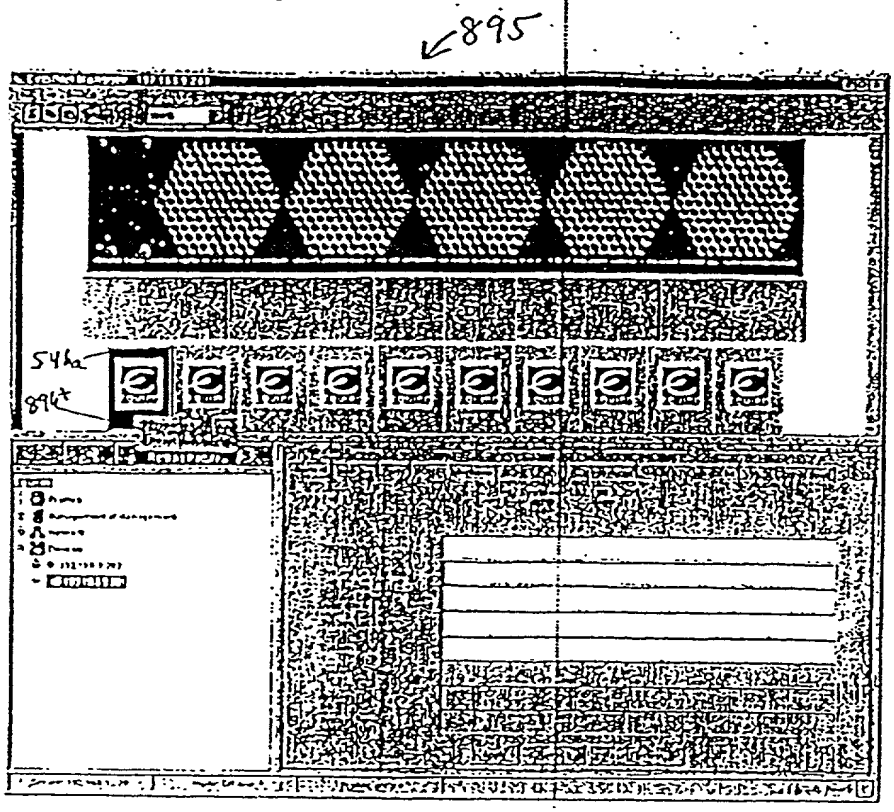


Fig. 6g

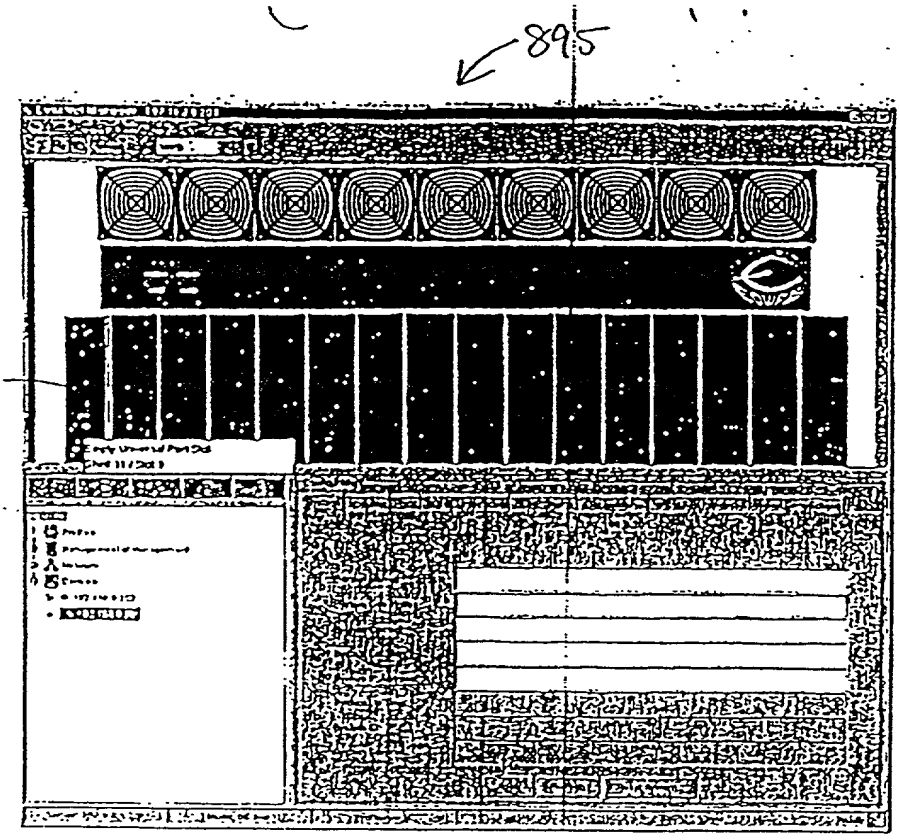


Fig. 6h

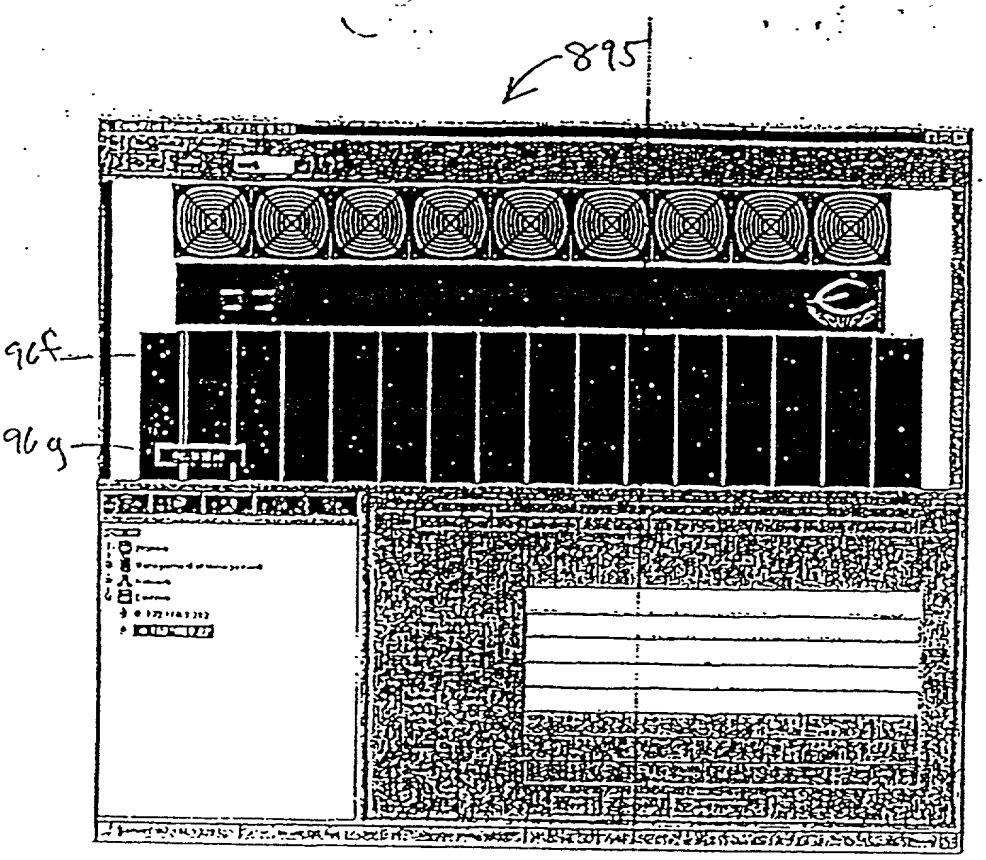
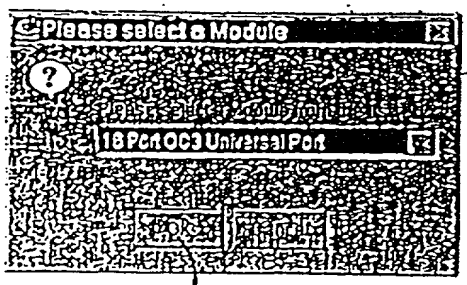


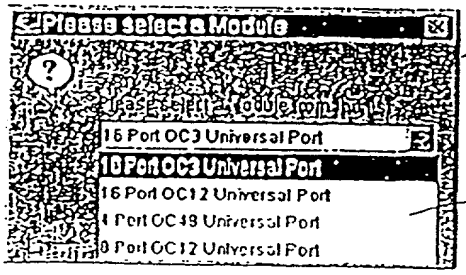
Fig. 6i

Fig. 6J



896h

896j



896h

896i

Fig. 6K

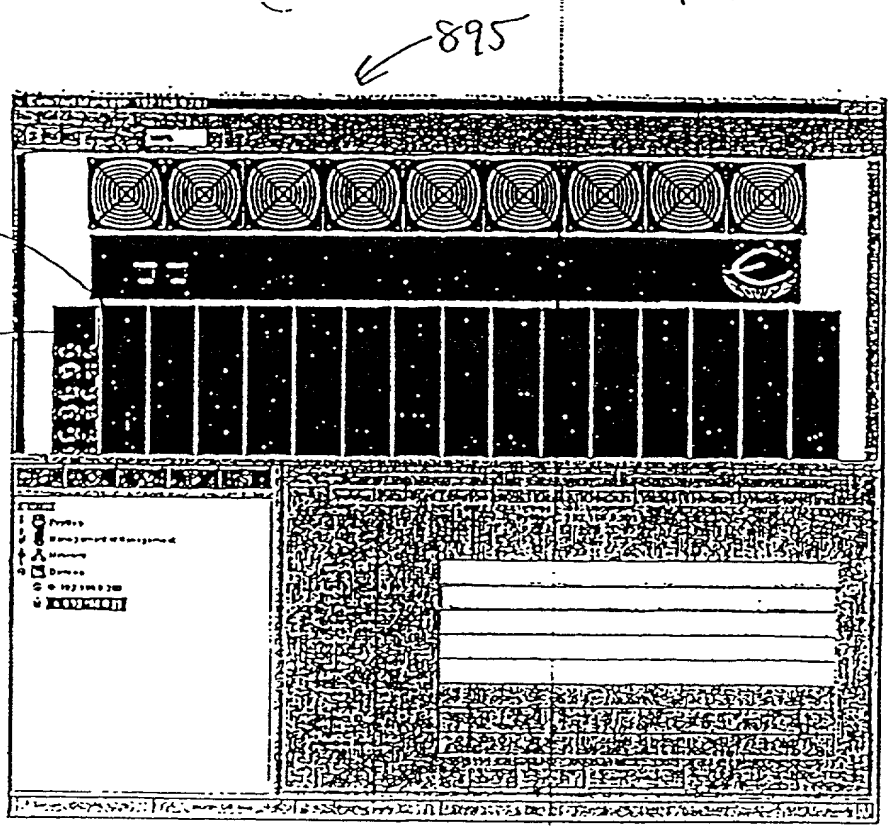


Fig. 61

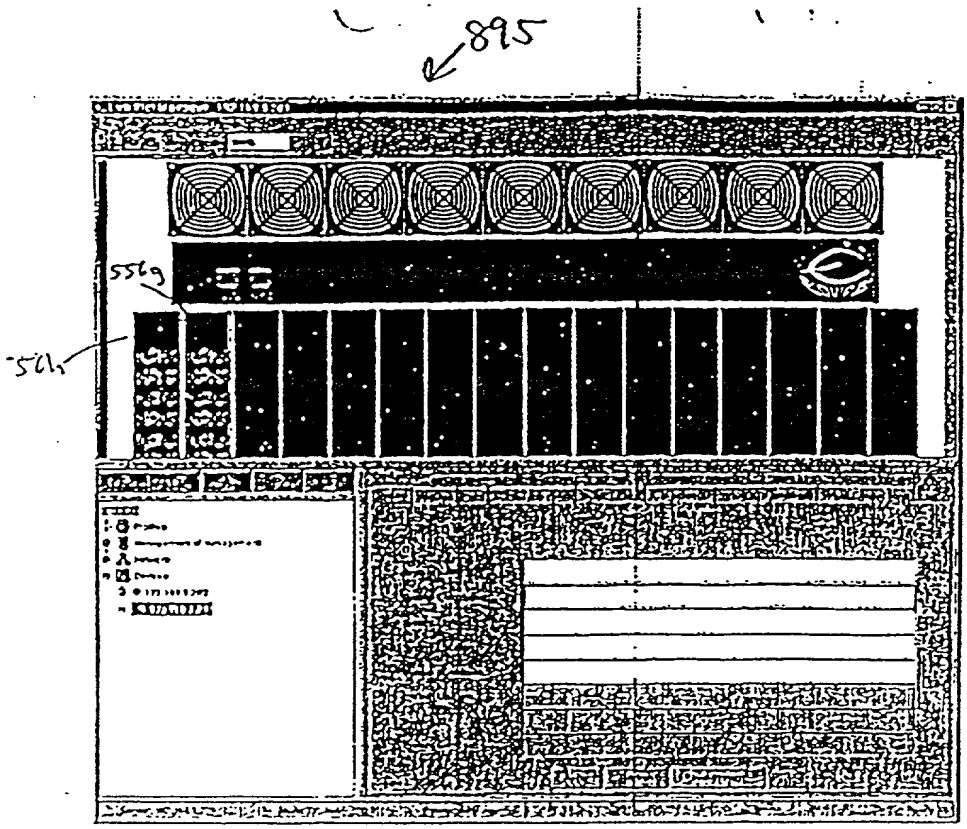


Fig. 6m

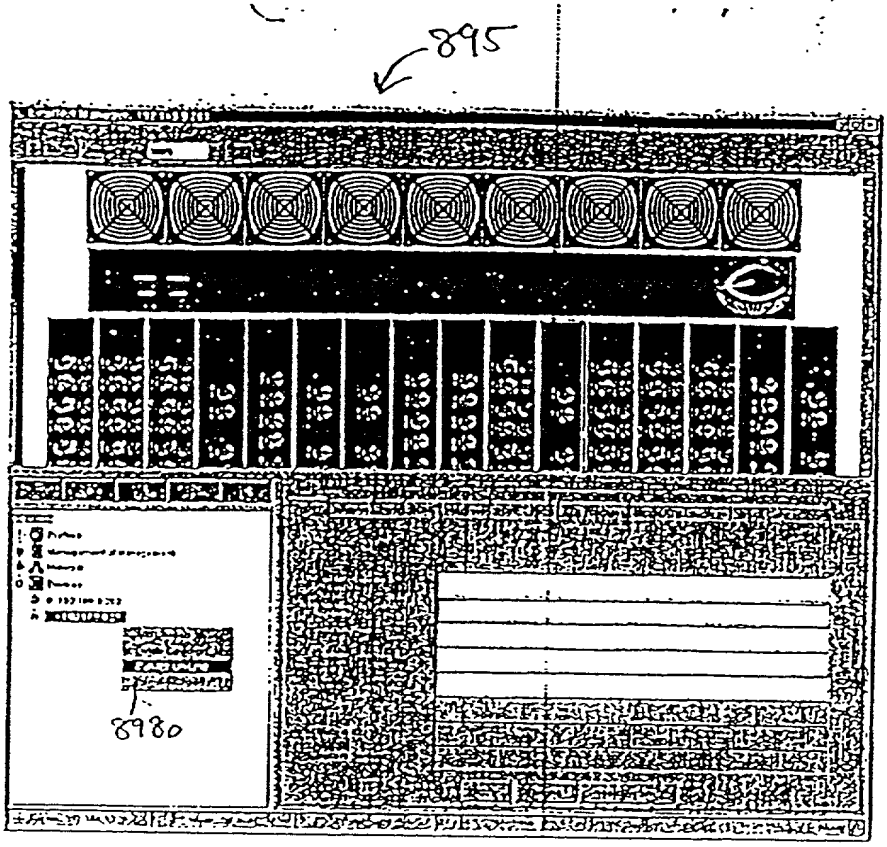


Fig. 6n

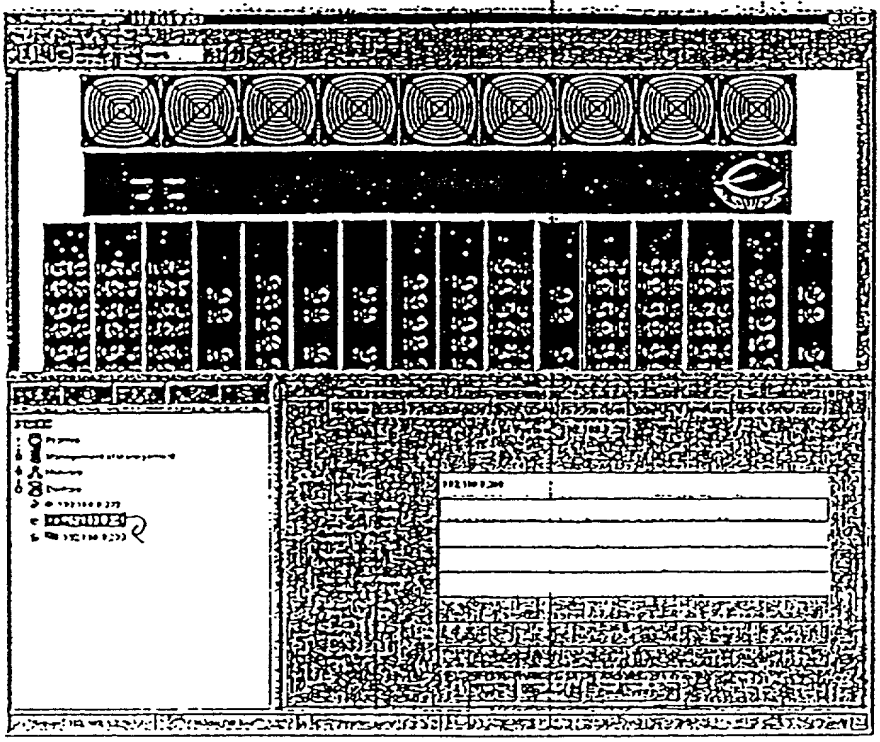


Fig. 6o

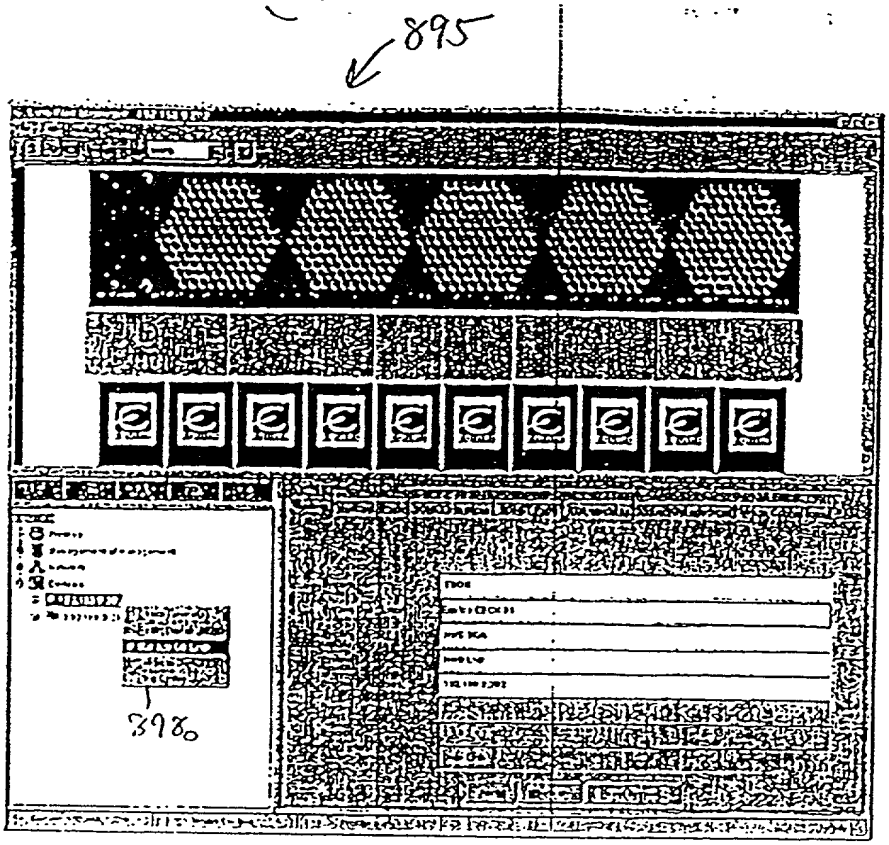


Fig. 6p

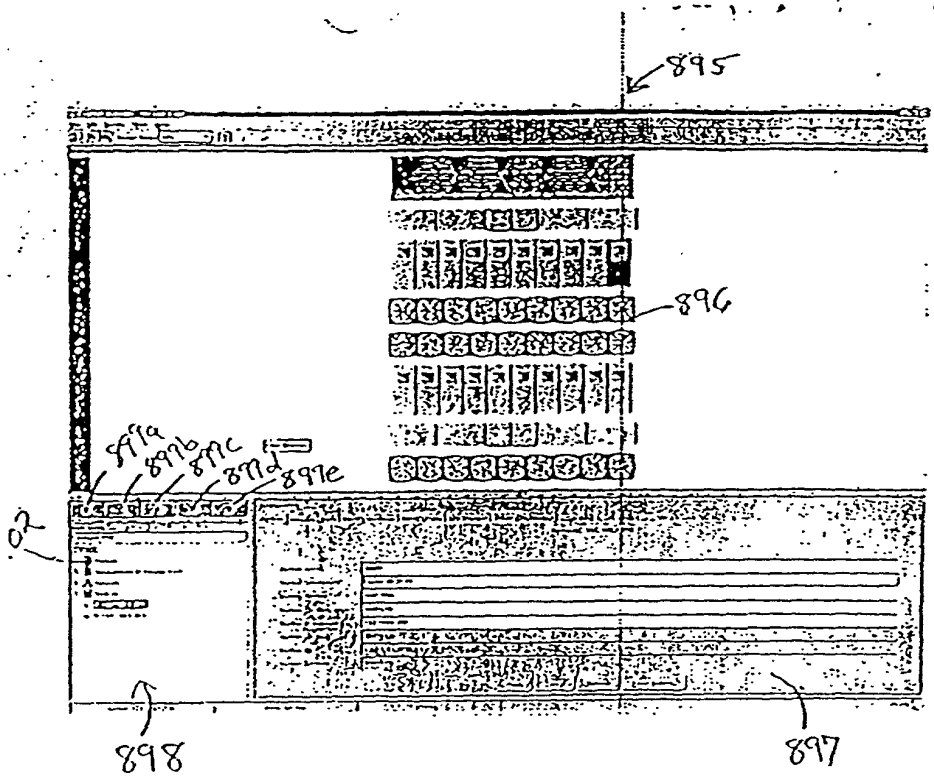
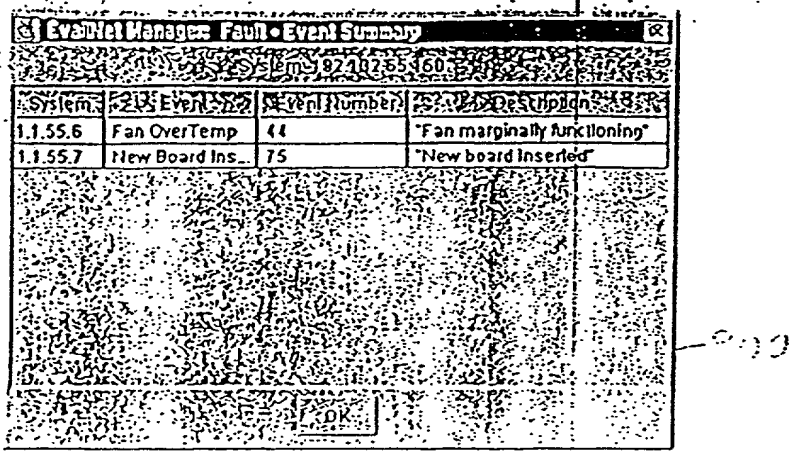


Fig. 9a

EPO - DG 1 - 05. 12. 2006 09:50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1.1.55.7
New Board Ins...
75
"New board inserted"
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Fig. 7b

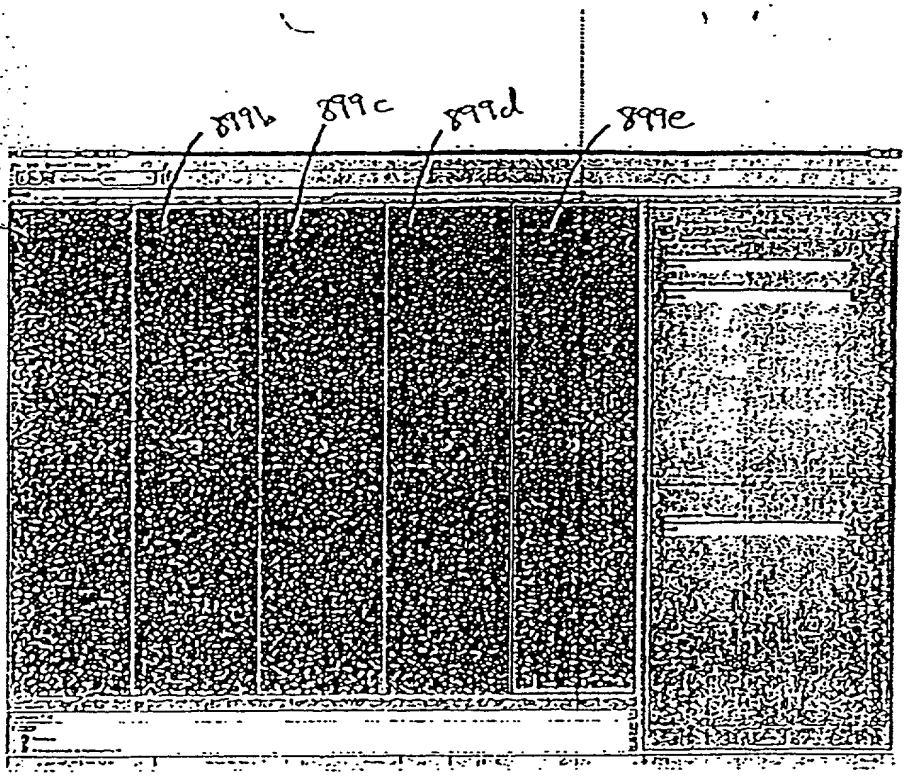


Fig.7c

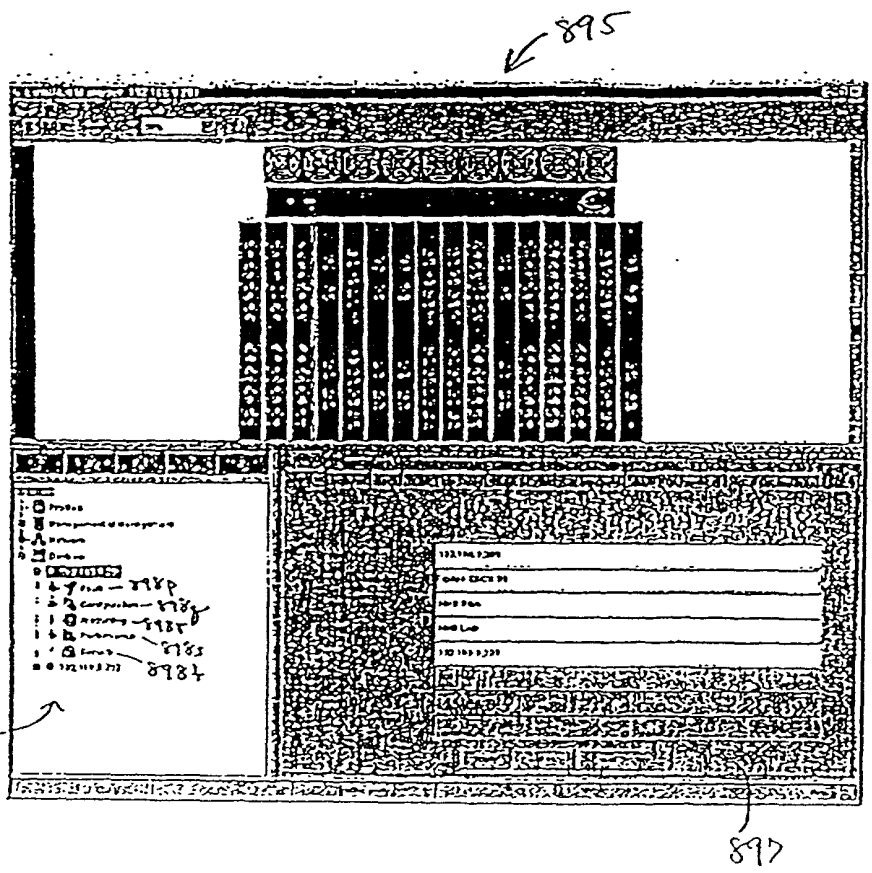


Fig. 7d

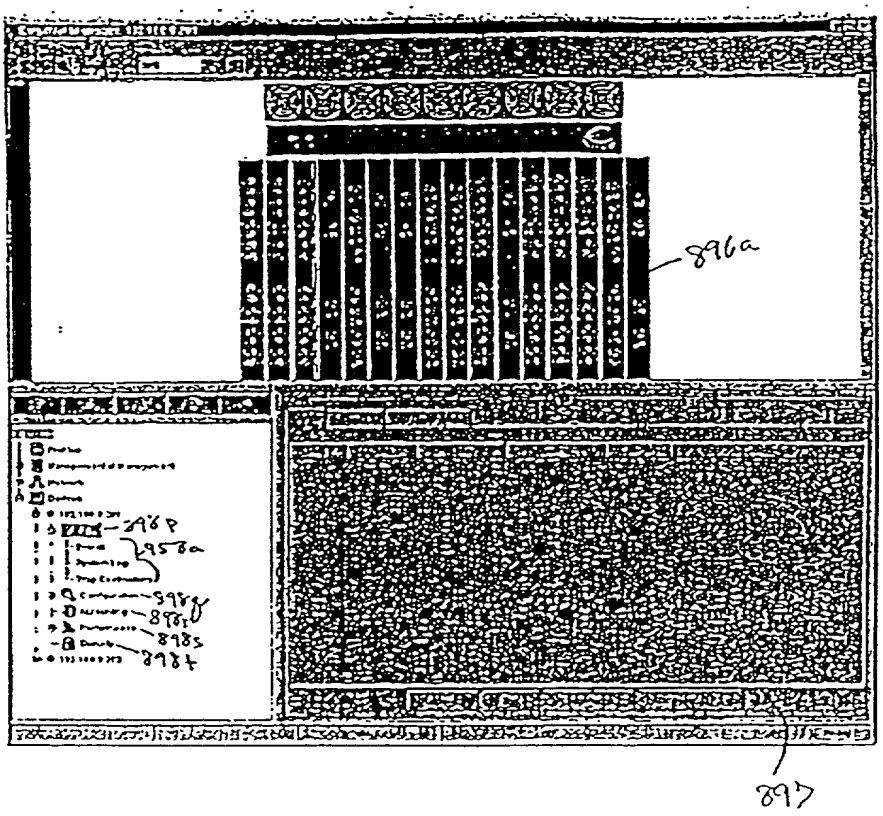


Fig. 7e

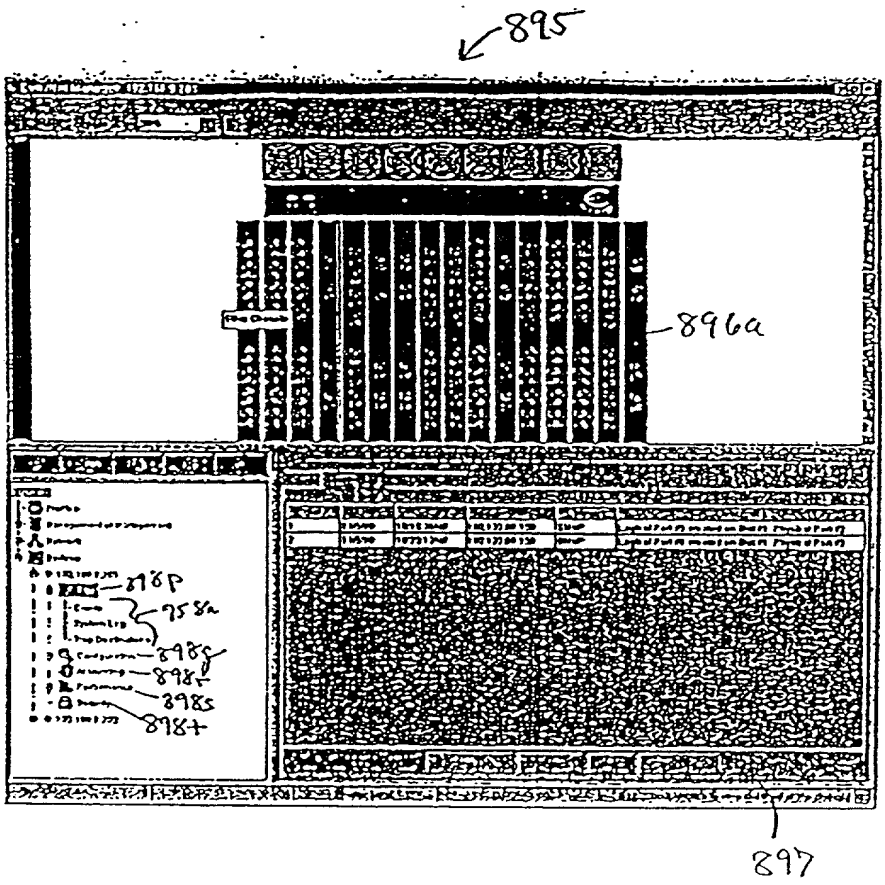


Fig. 7f

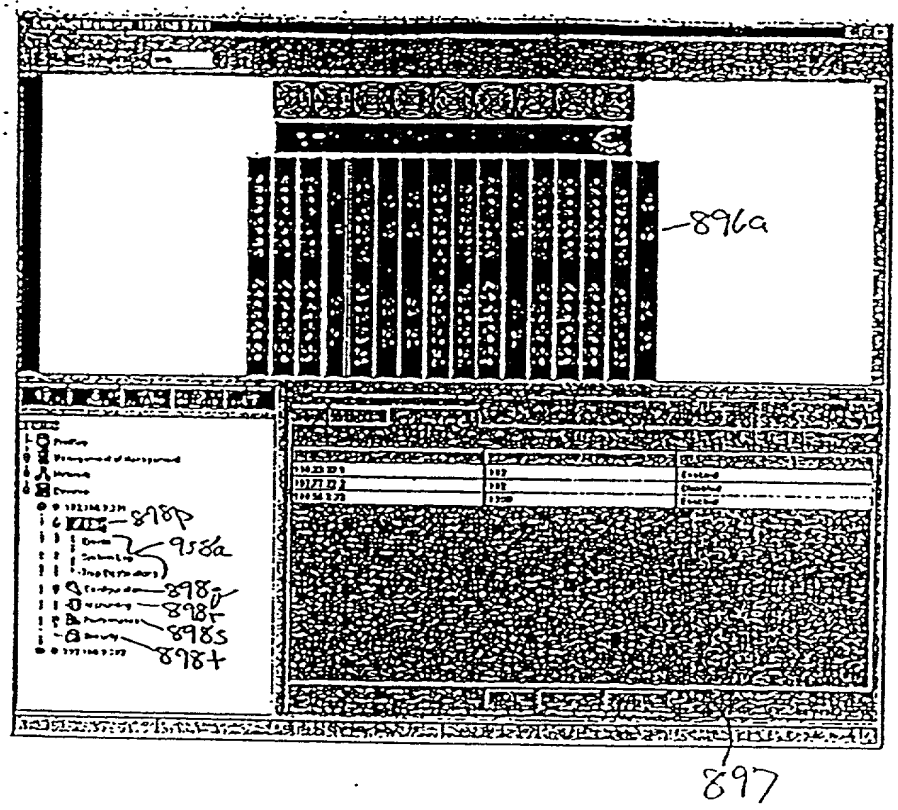


Fig. 7g

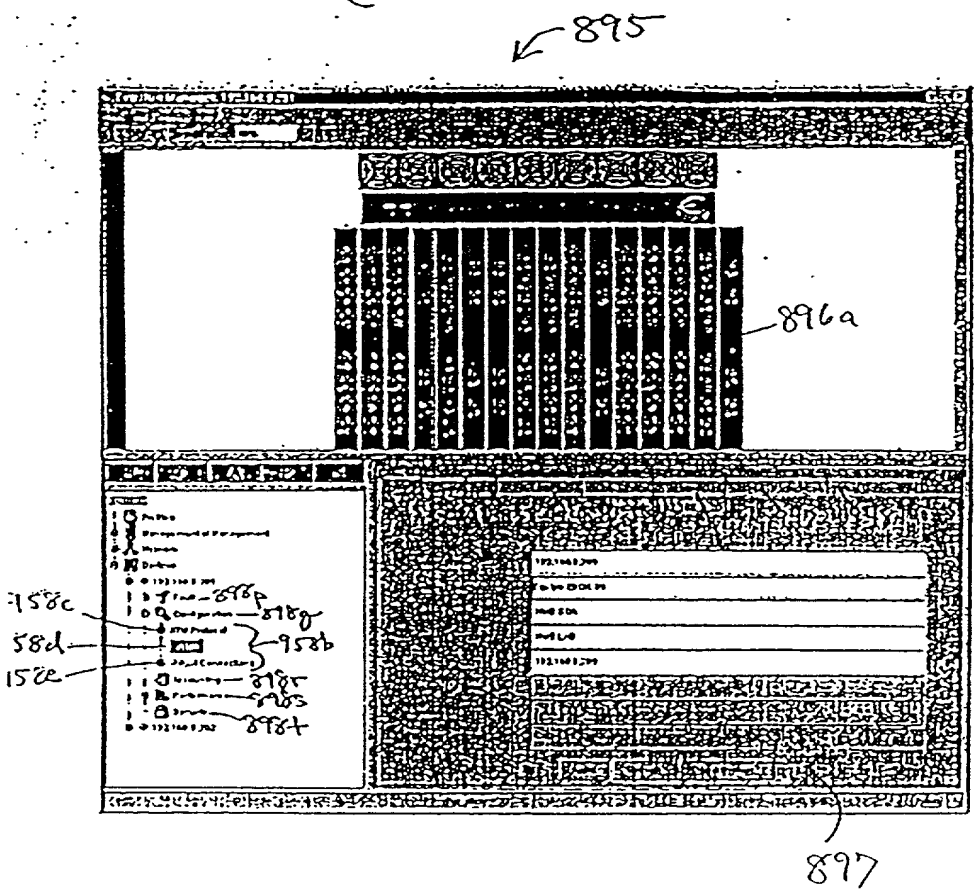


Fig. 7h

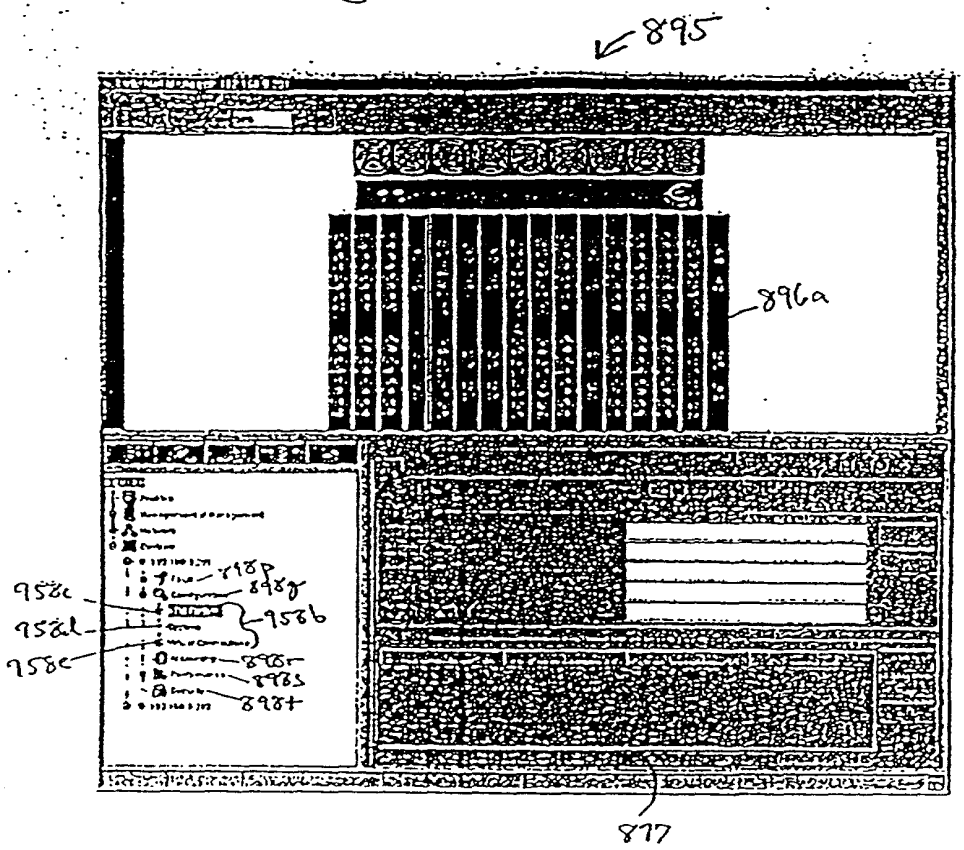
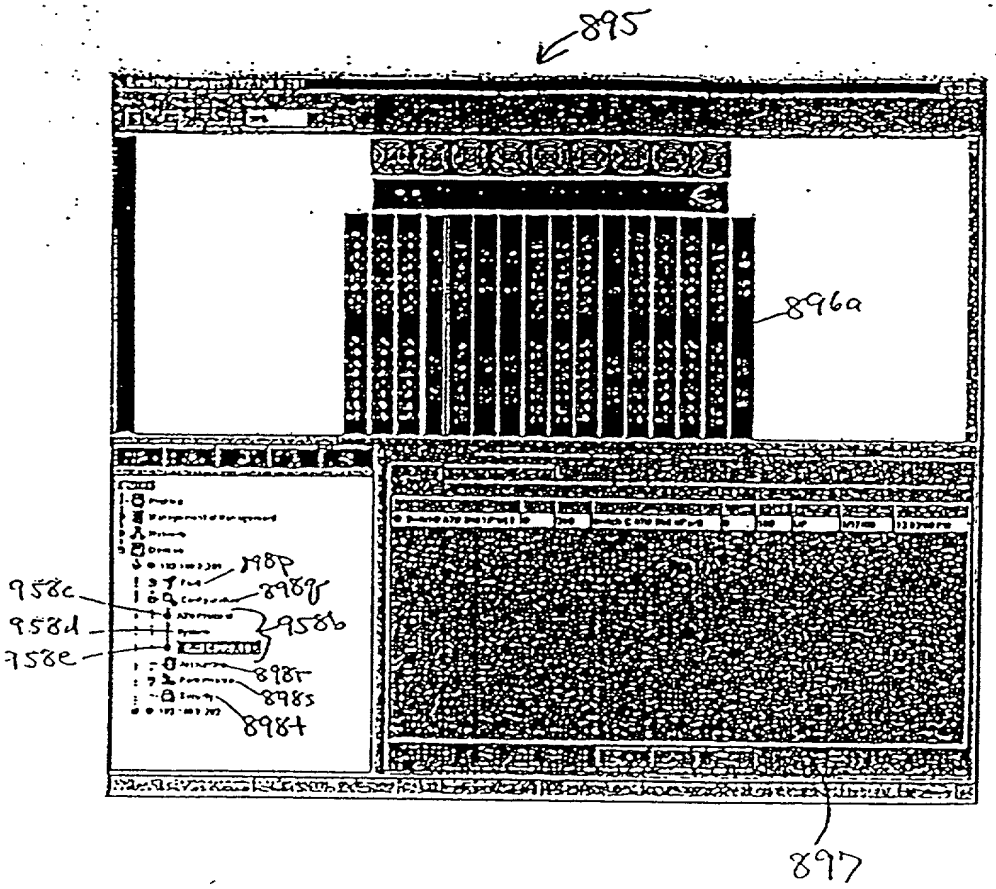


Fig 7i



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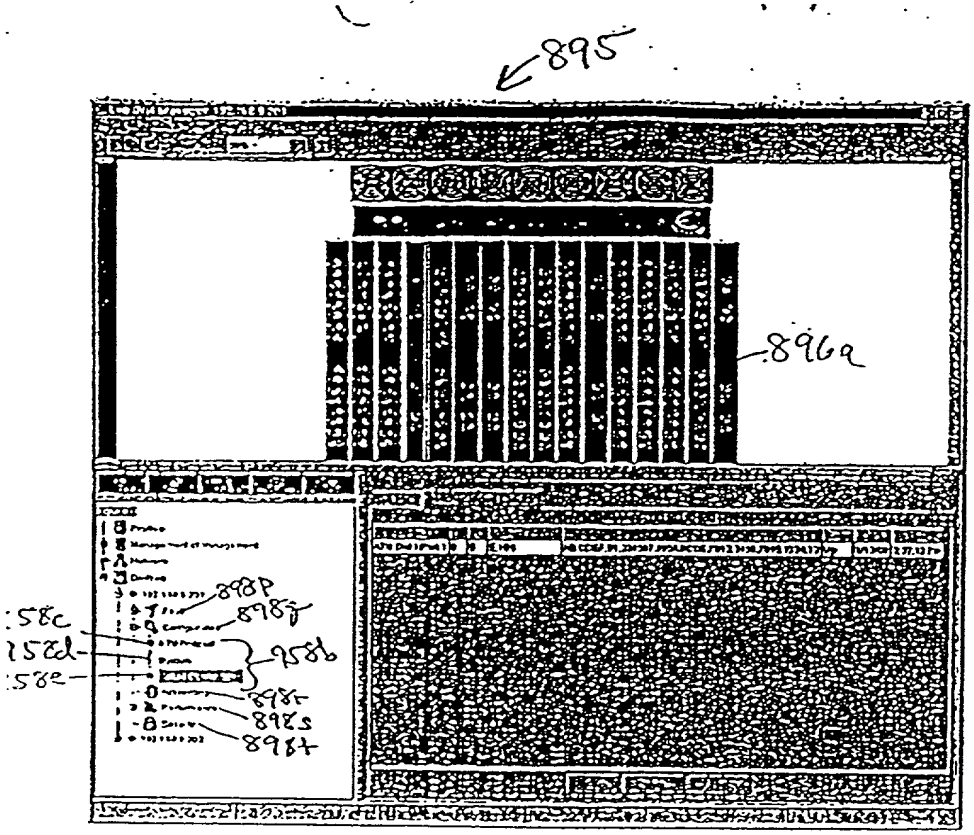

Fig. 7K

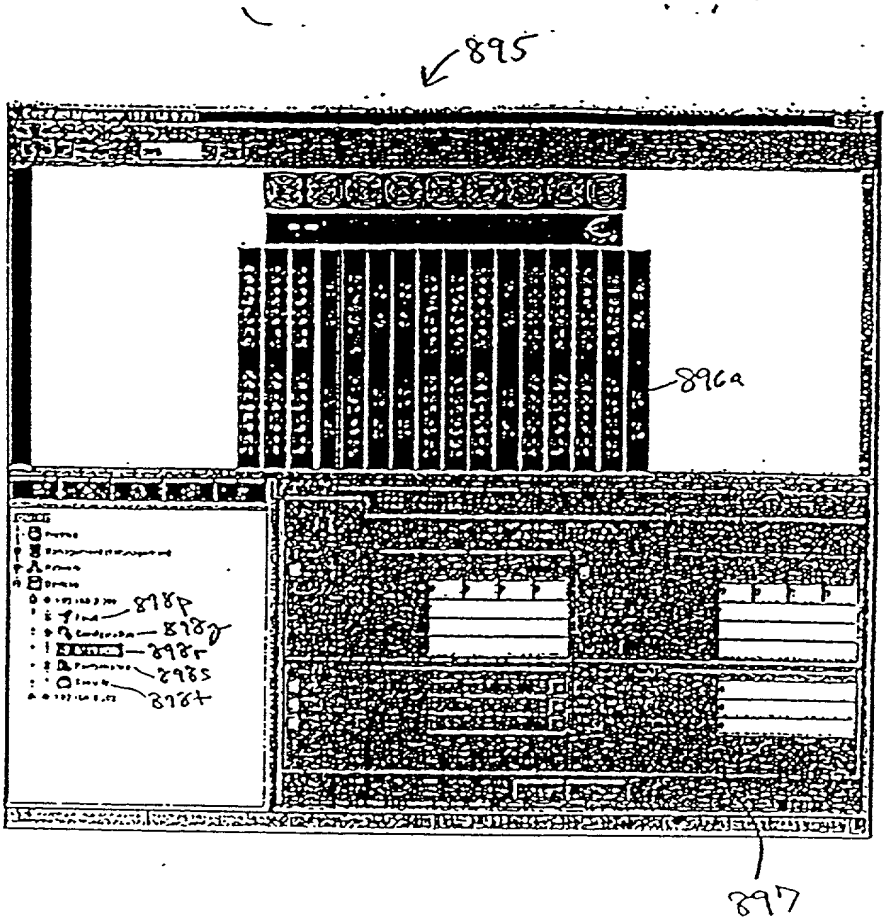

Fig. 7L

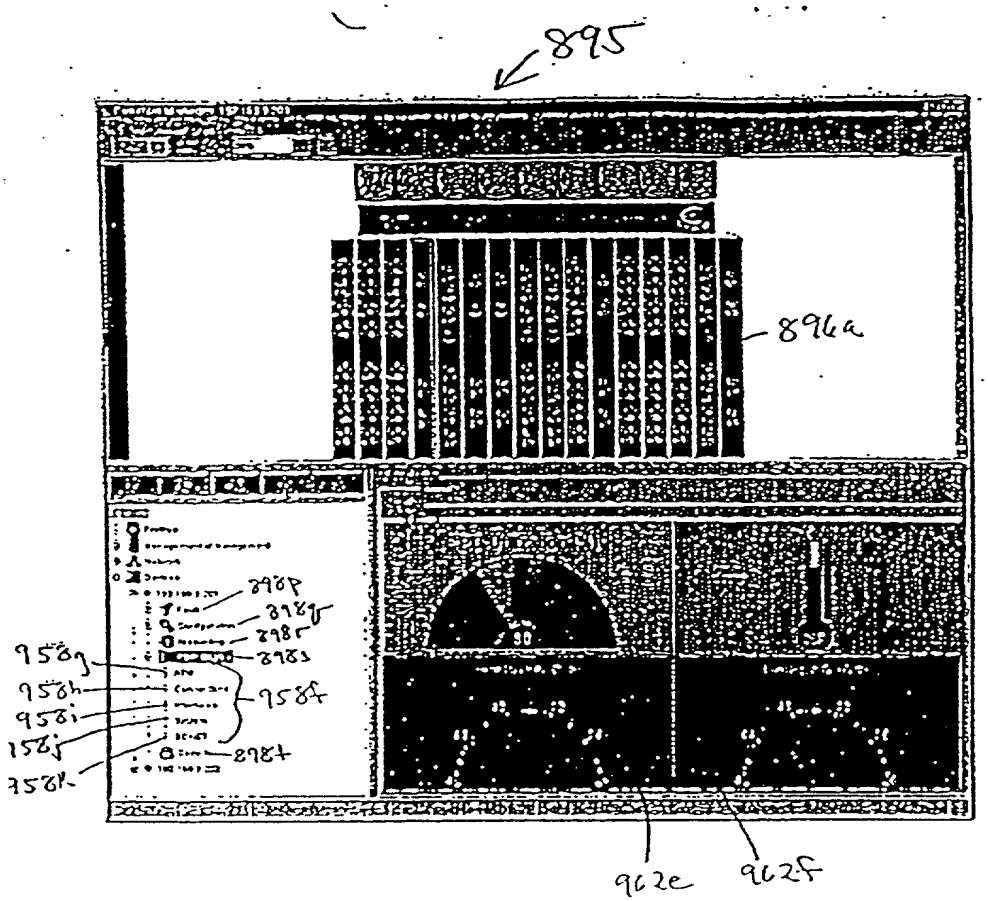

Fig. 7m

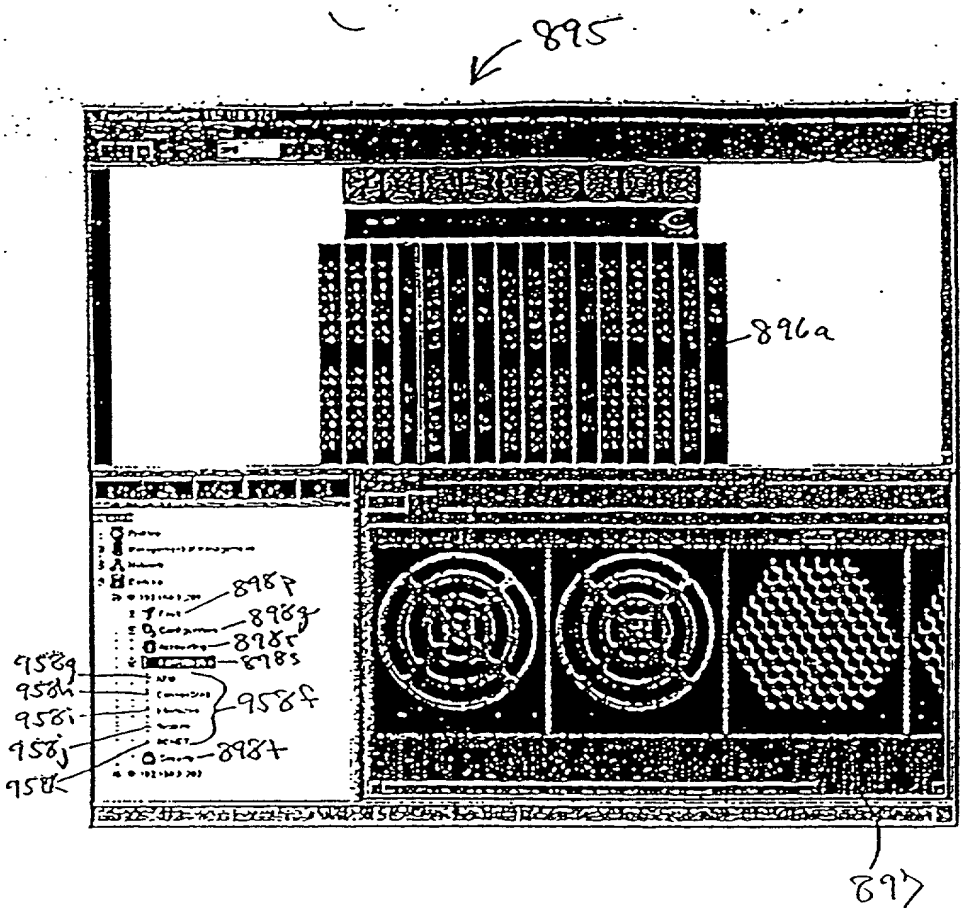
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Fig. 7n

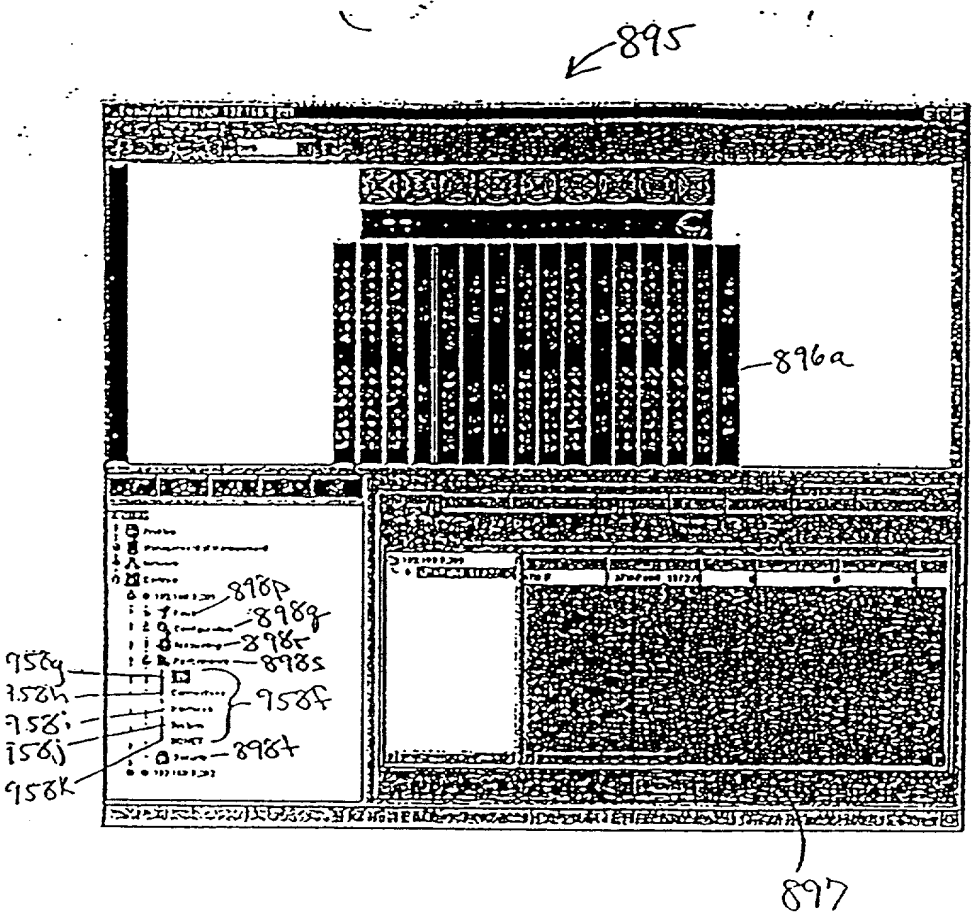
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Fig. 7o

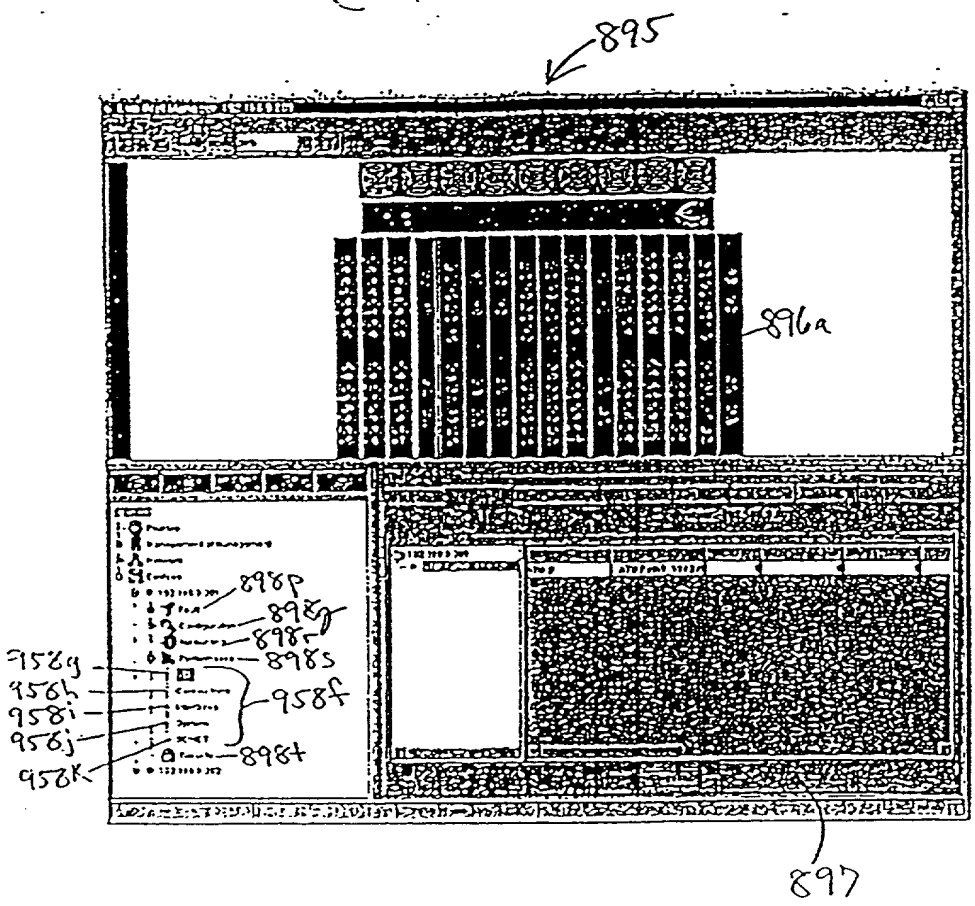
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Fig. 7p

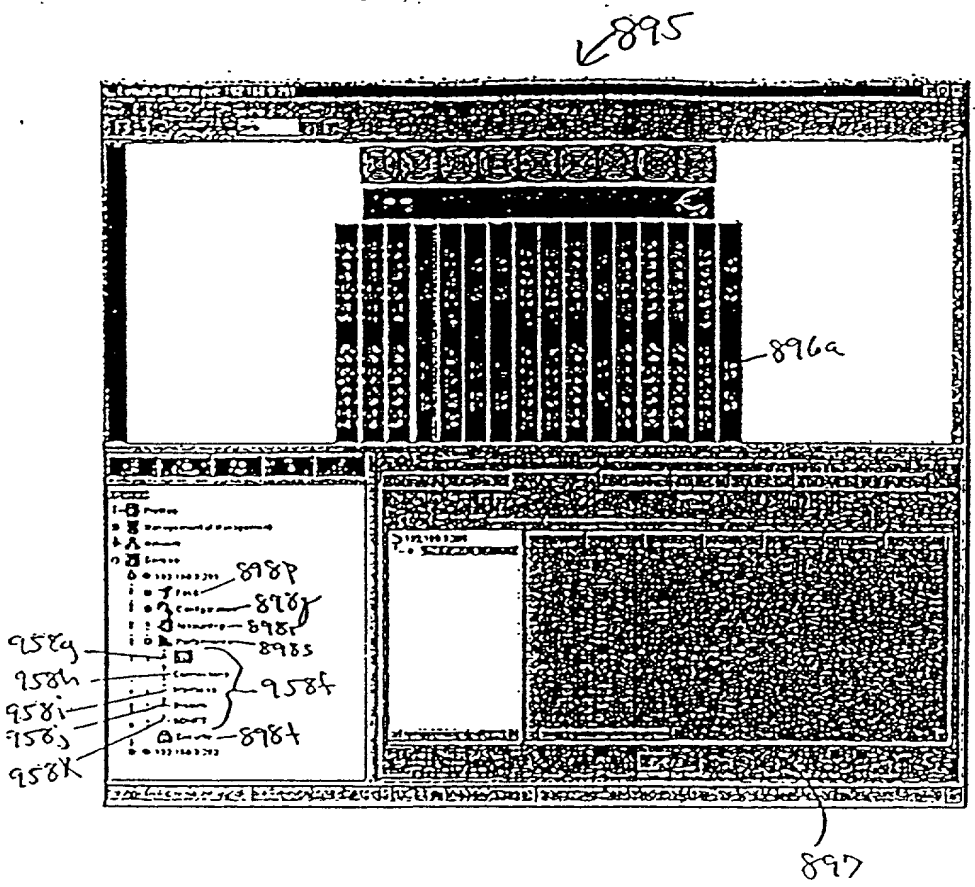
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Fig. 7g

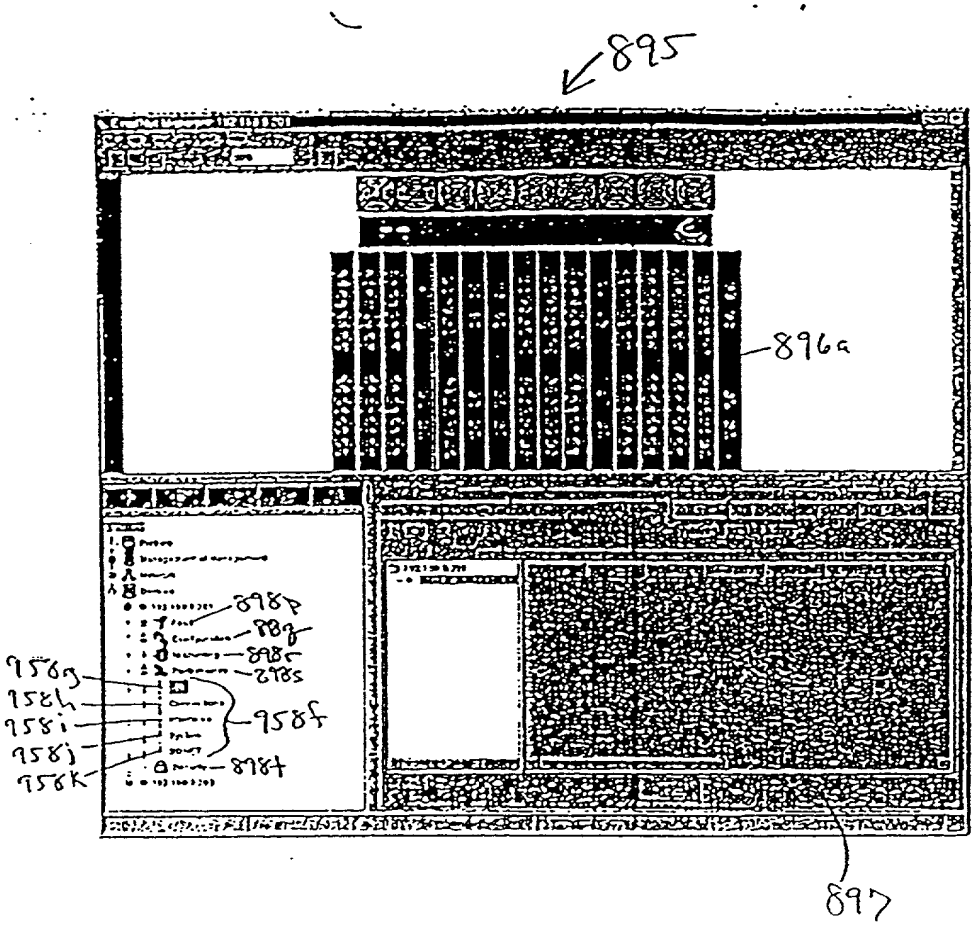
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Fig. 7F

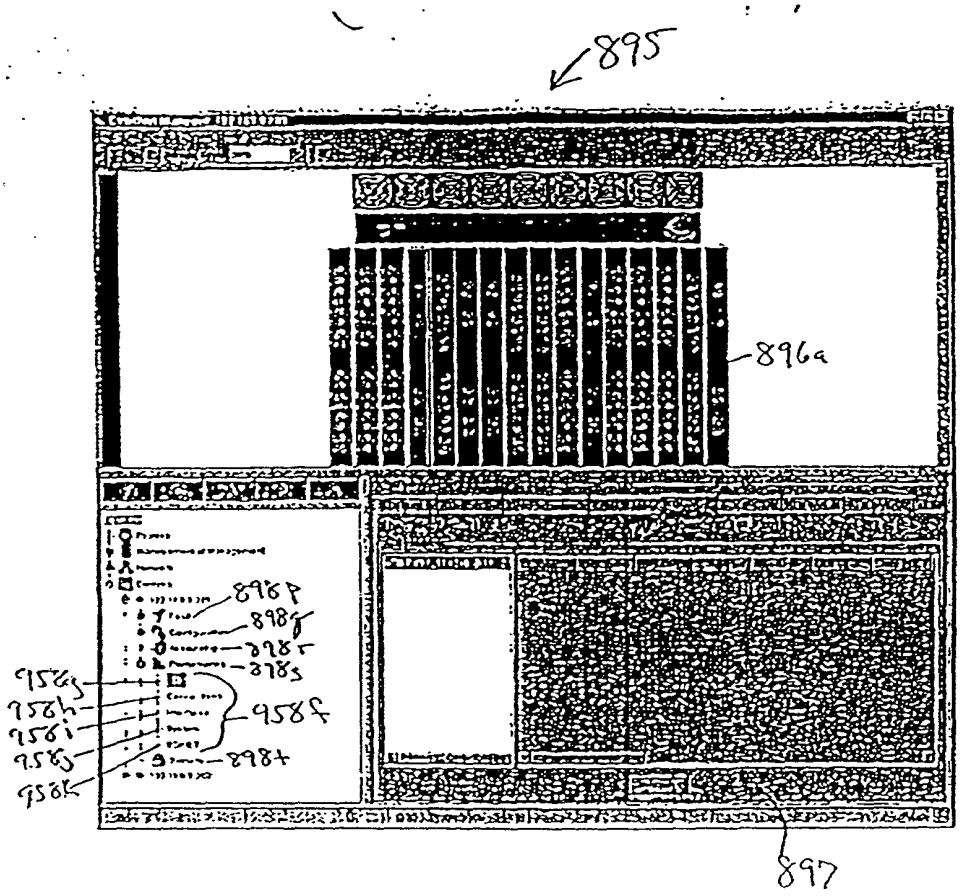
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Fig. 7s

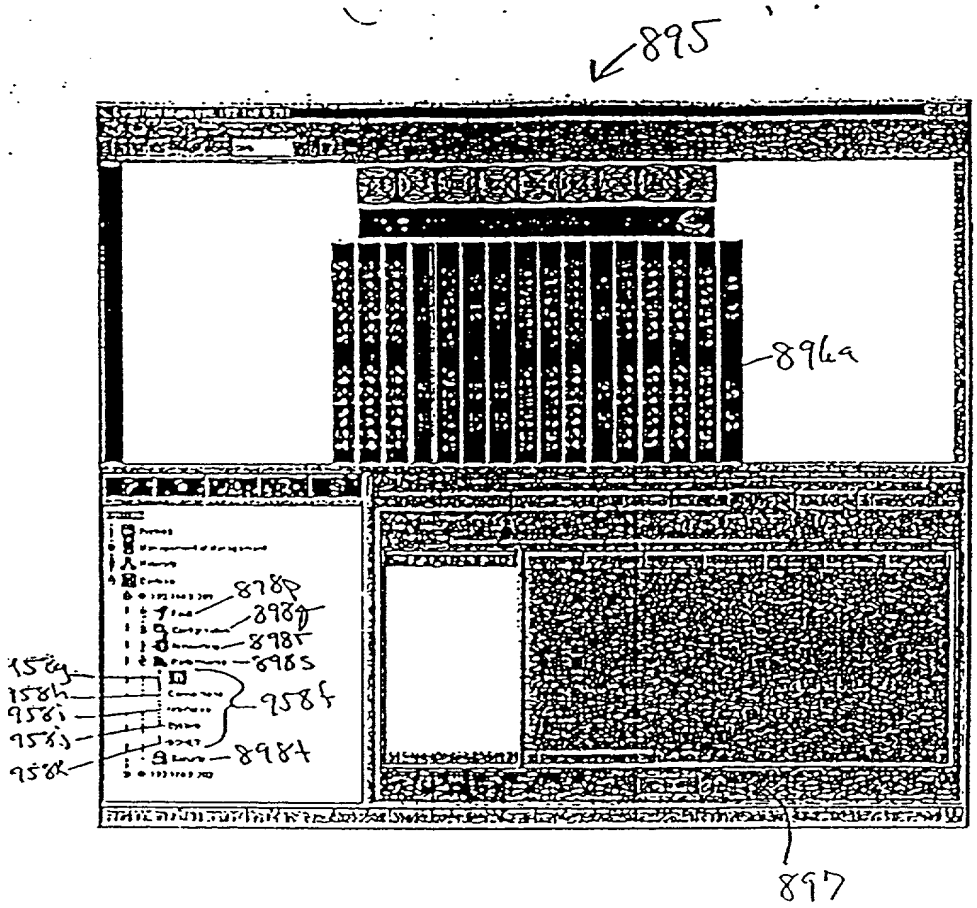
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Fig. 7t

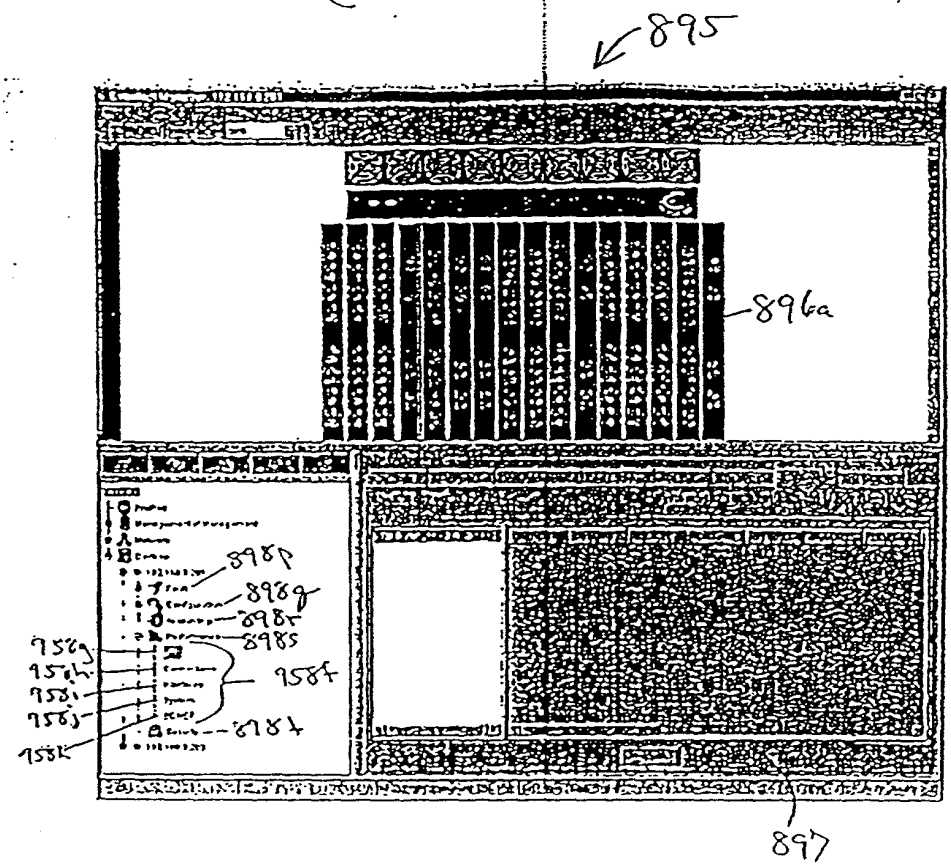

Fig. 7u

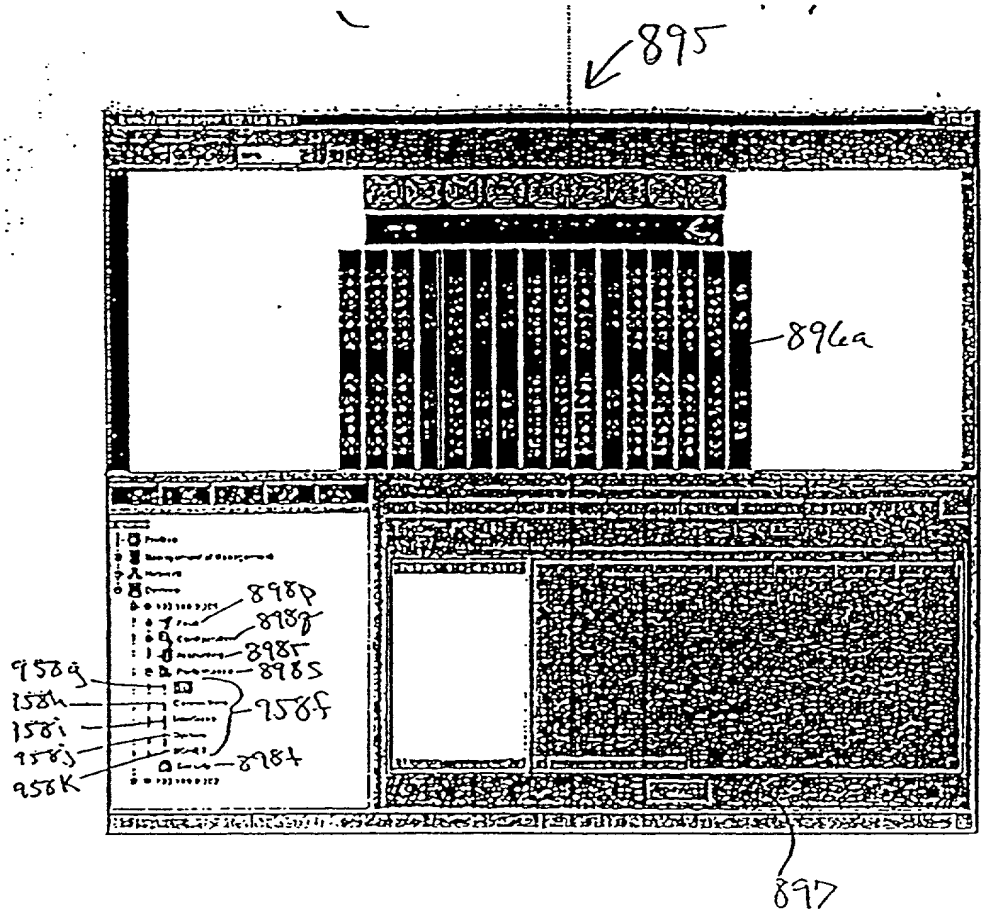
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Fig. 7v

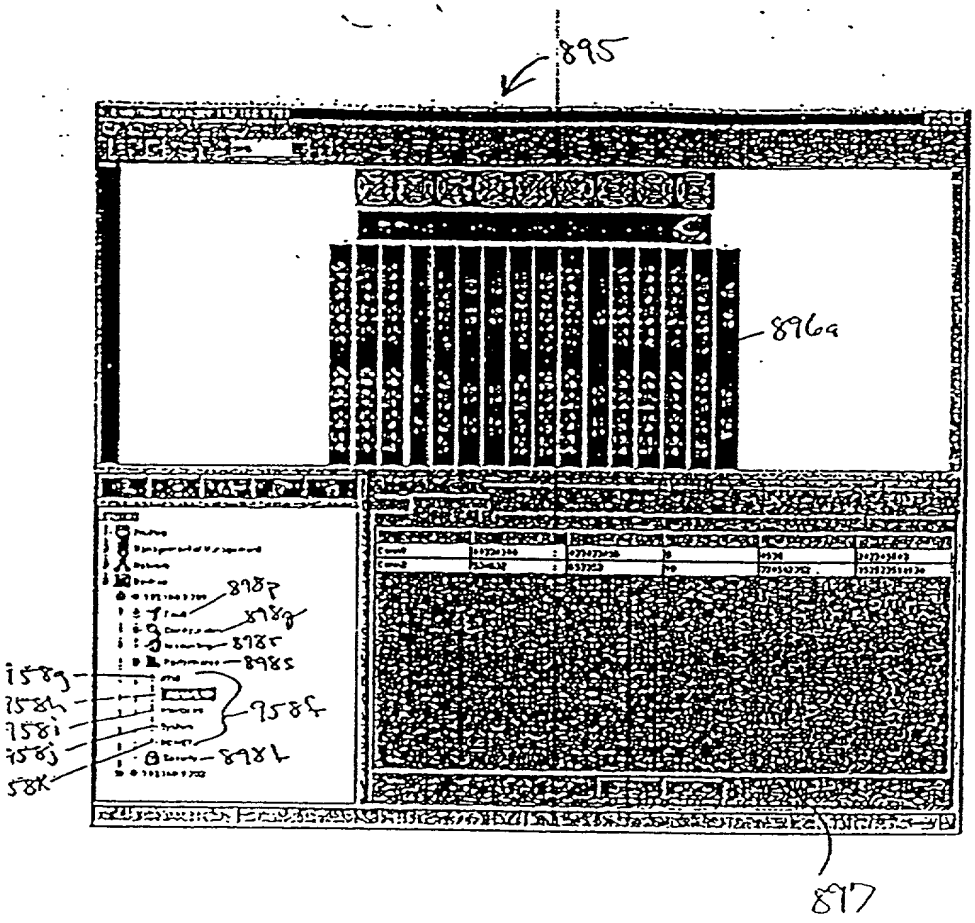

Fig. 7w

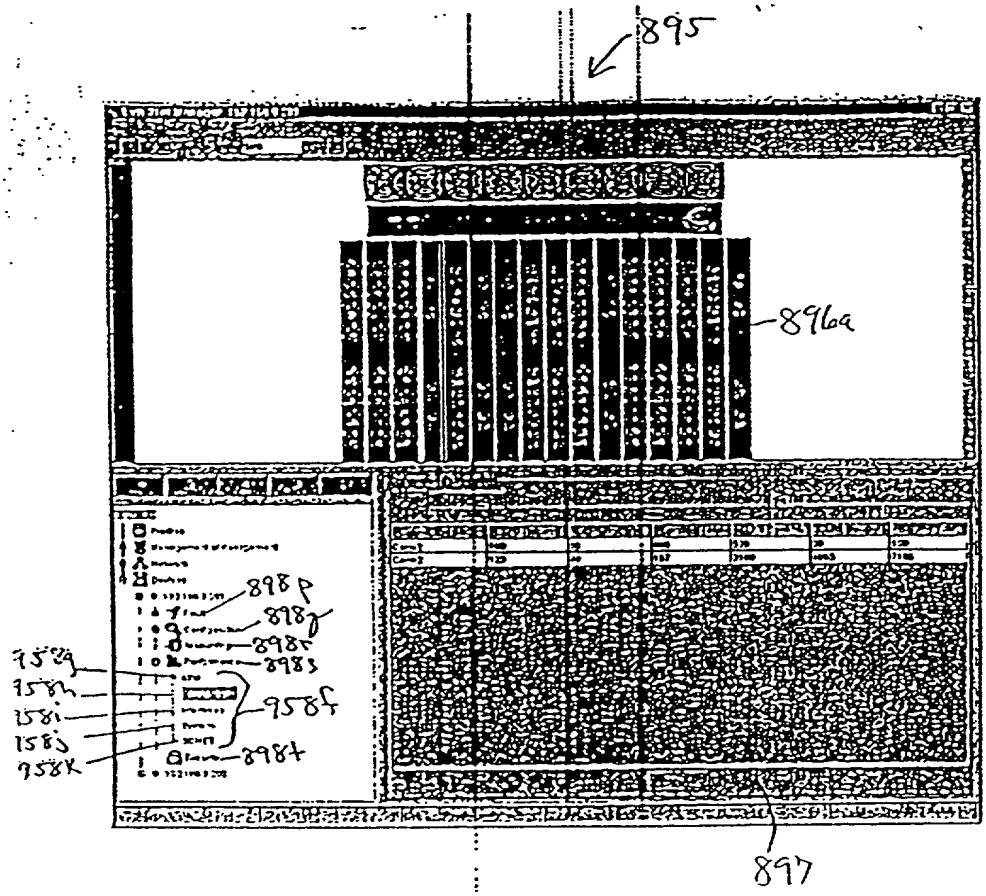
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Fig. 7x

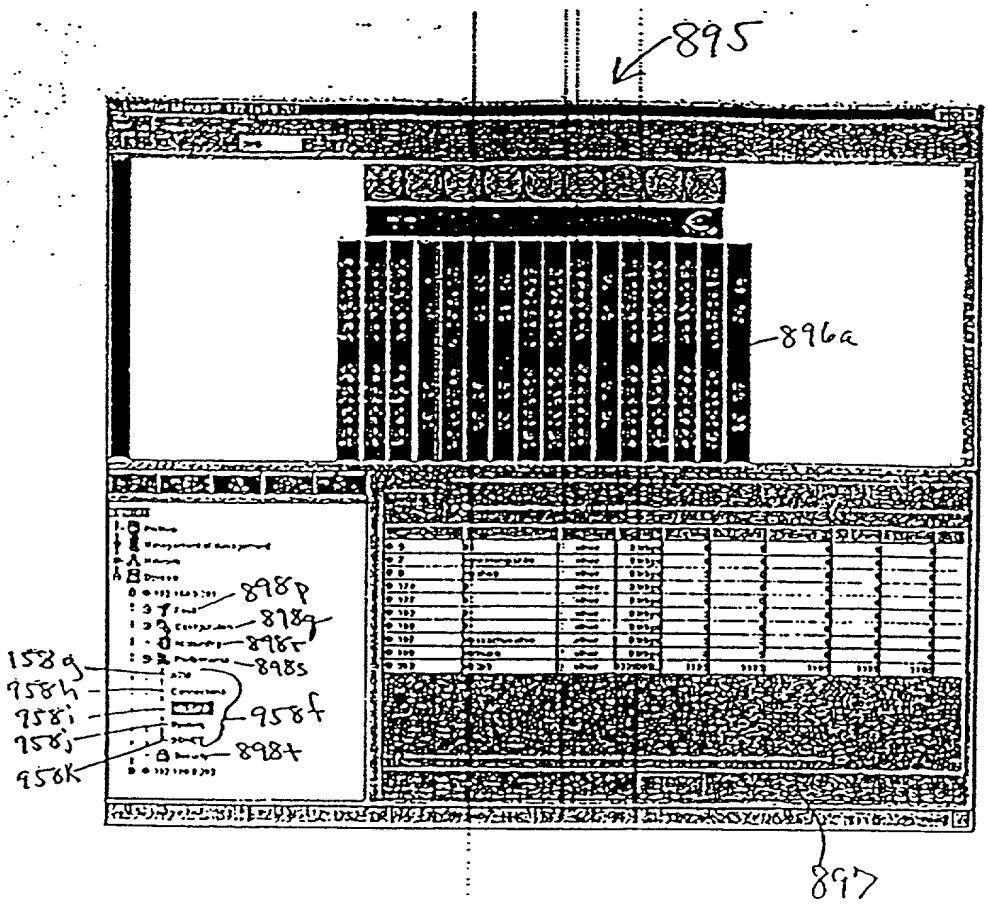
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Fig. 7y

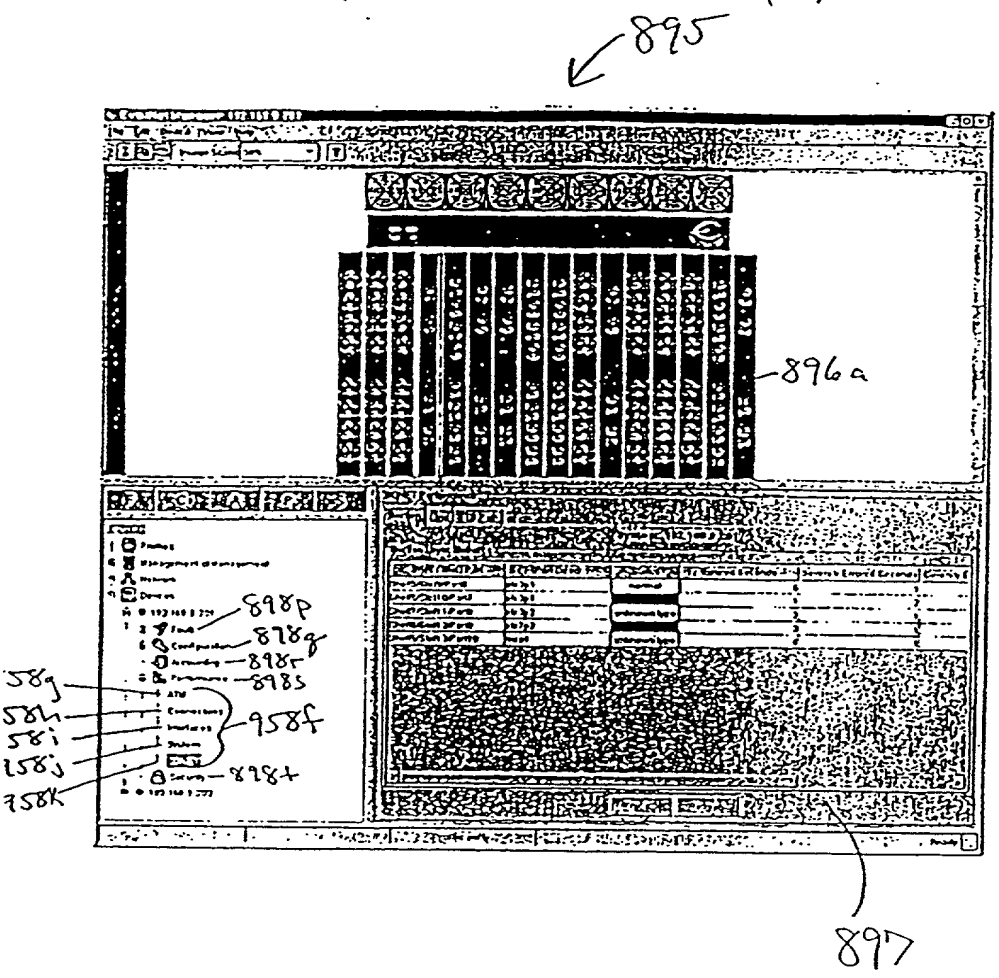
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Fig. 8a

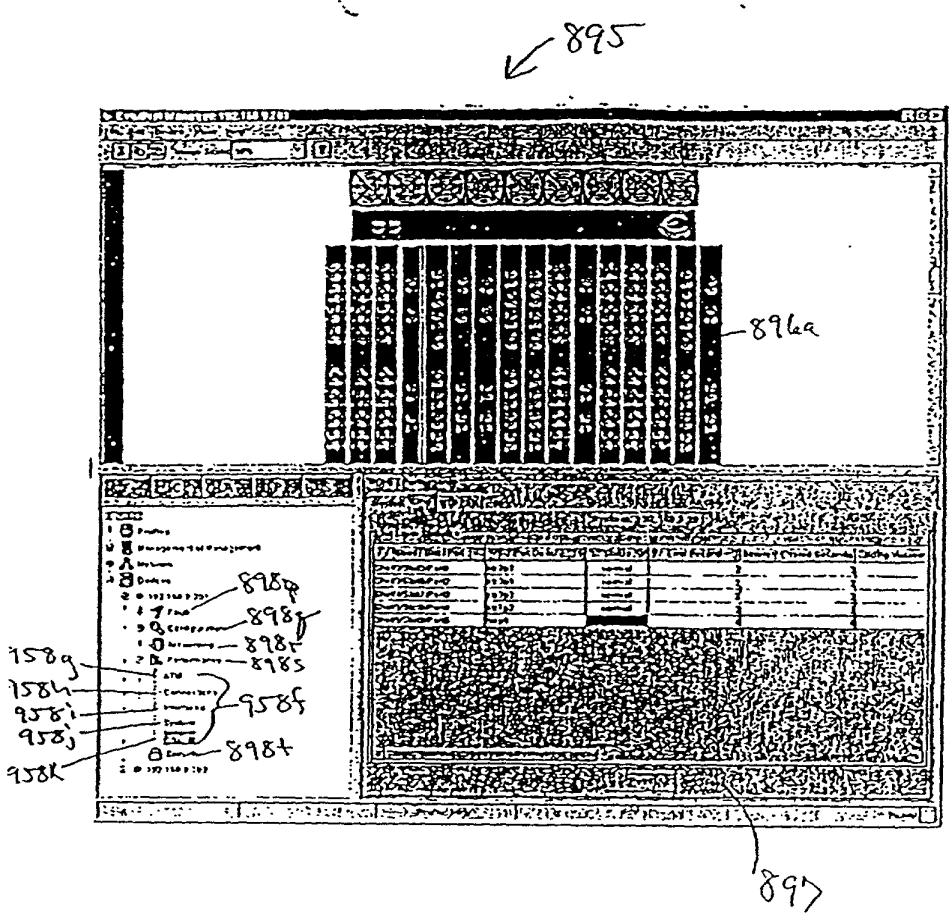
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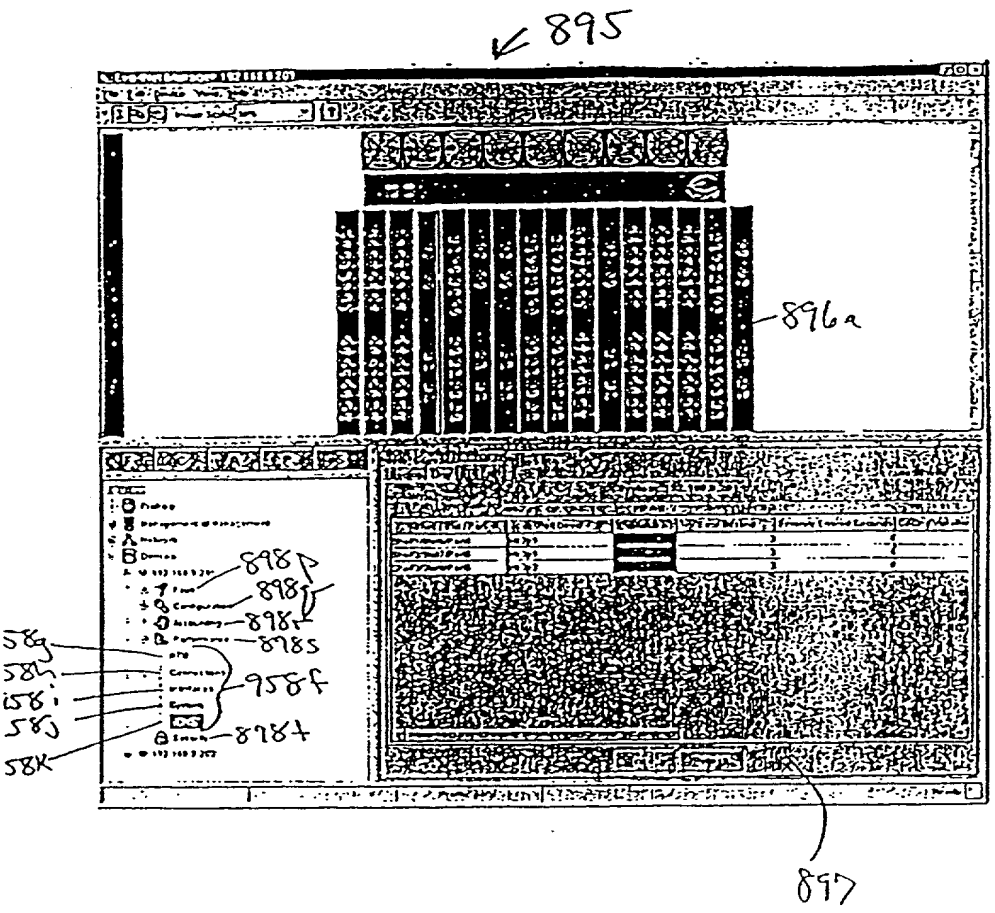
Fig. 86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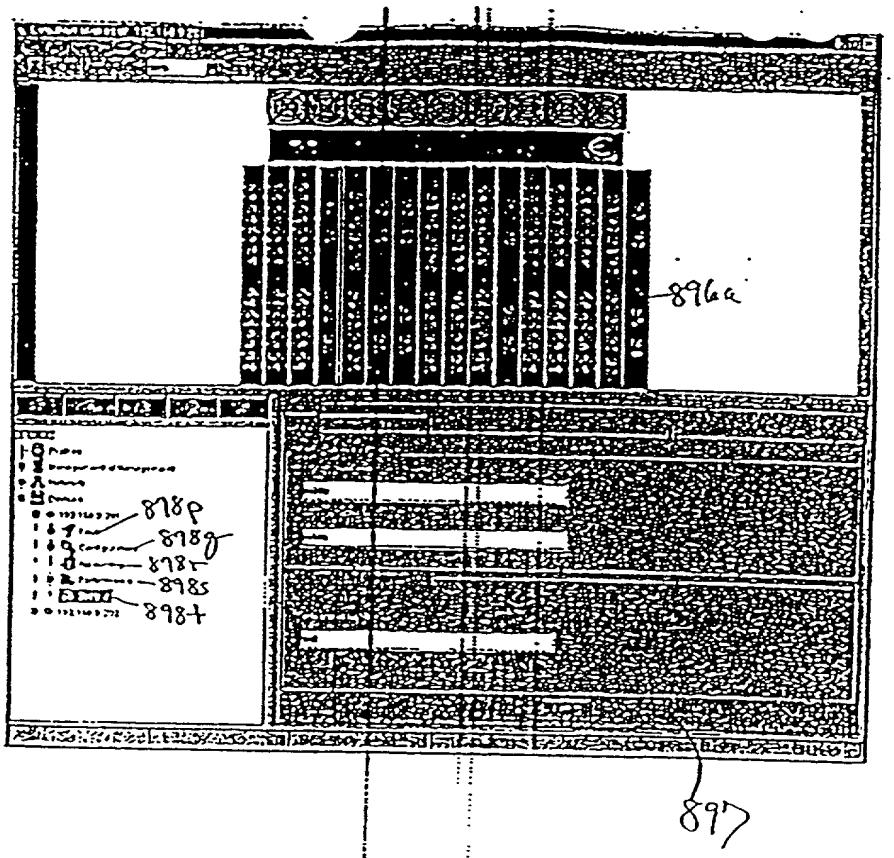

Fig 8d

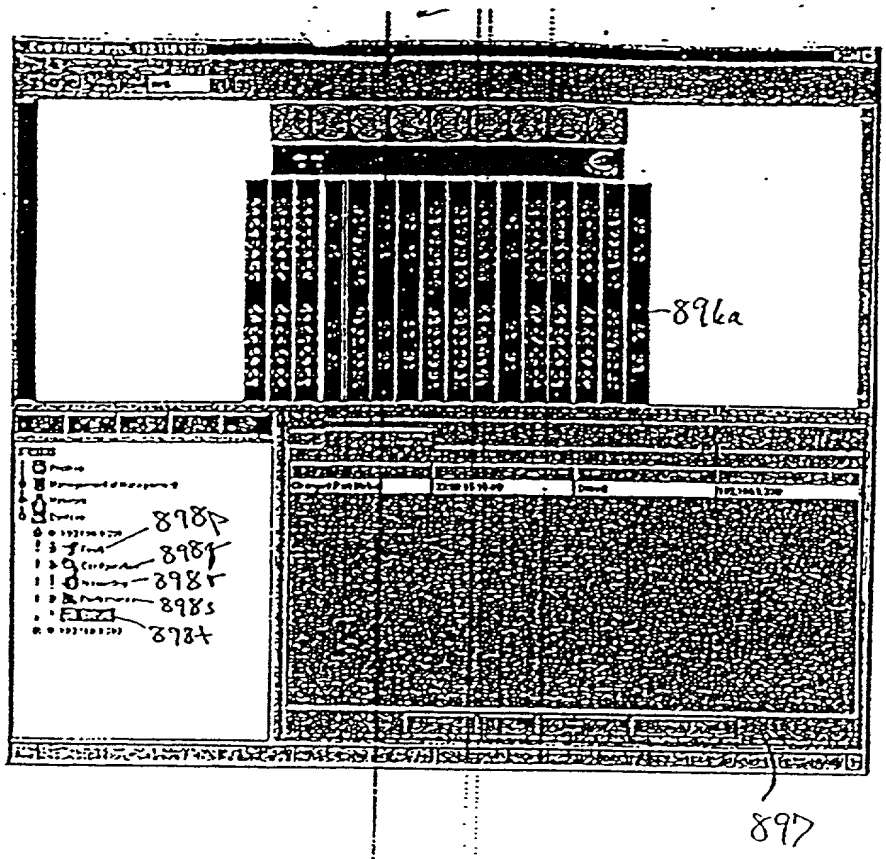

Fig. 8e

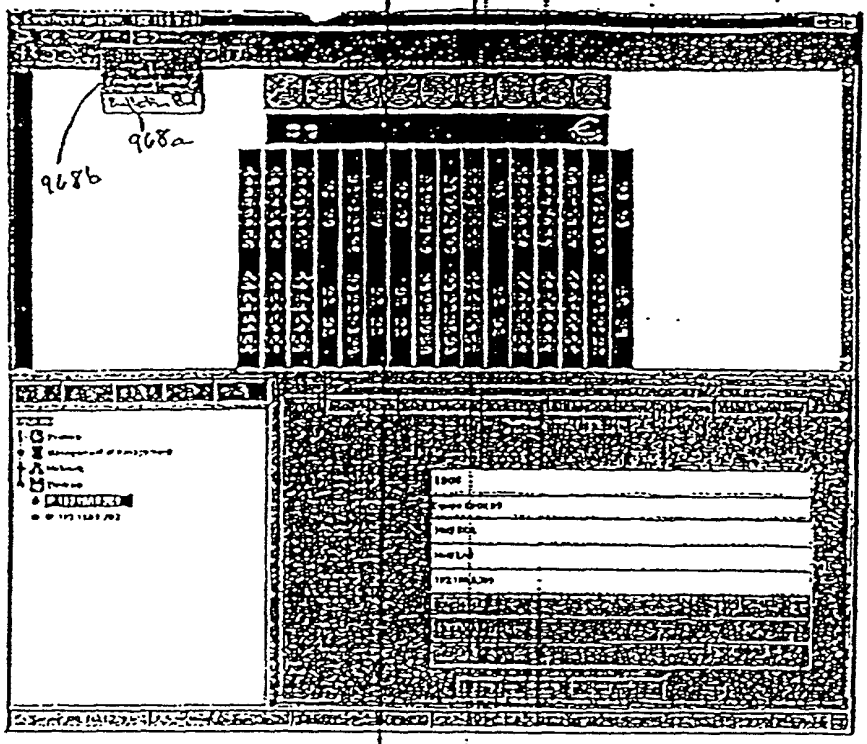

Fig. 9a

DOCKET ORIGINAL

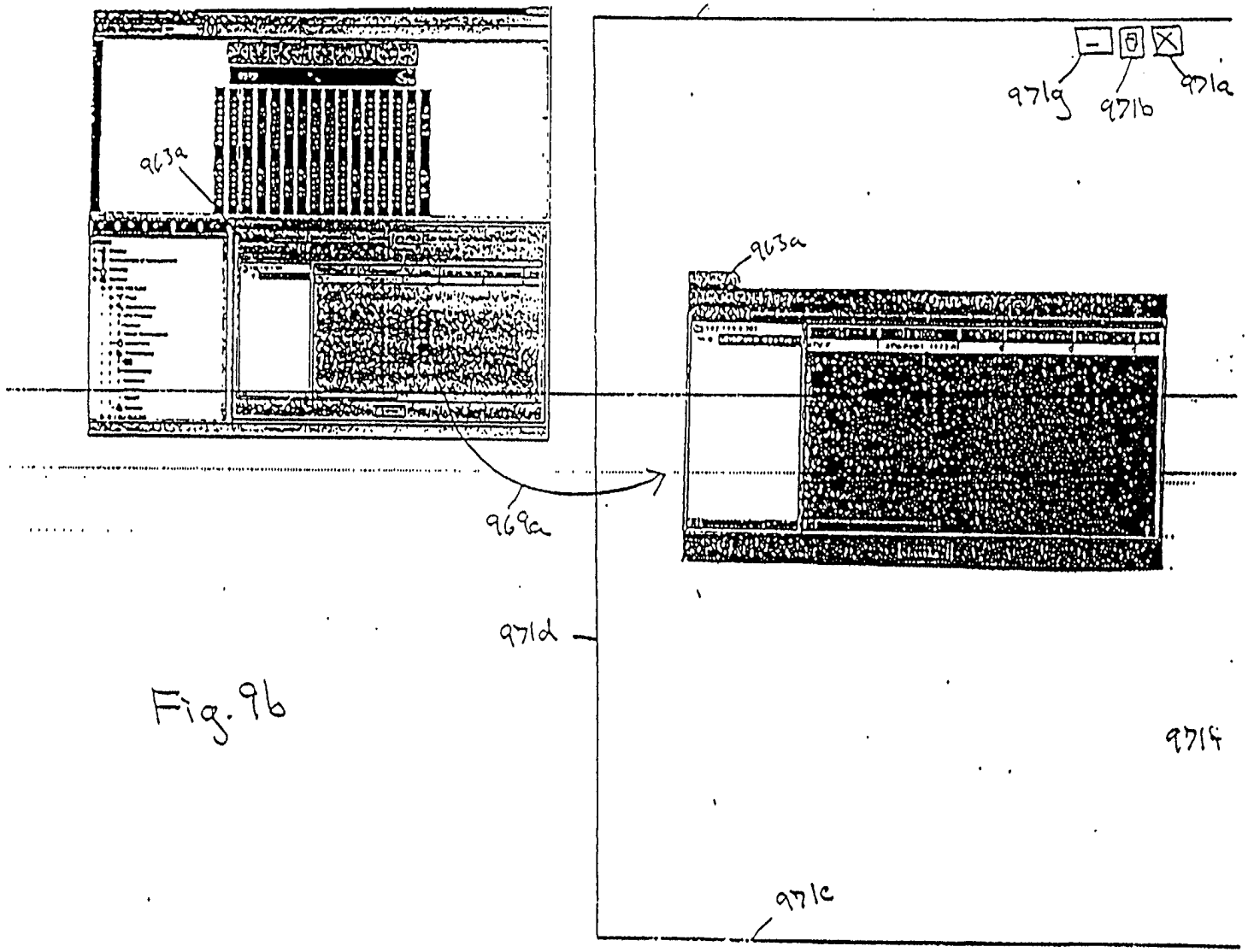

Fig. 9b

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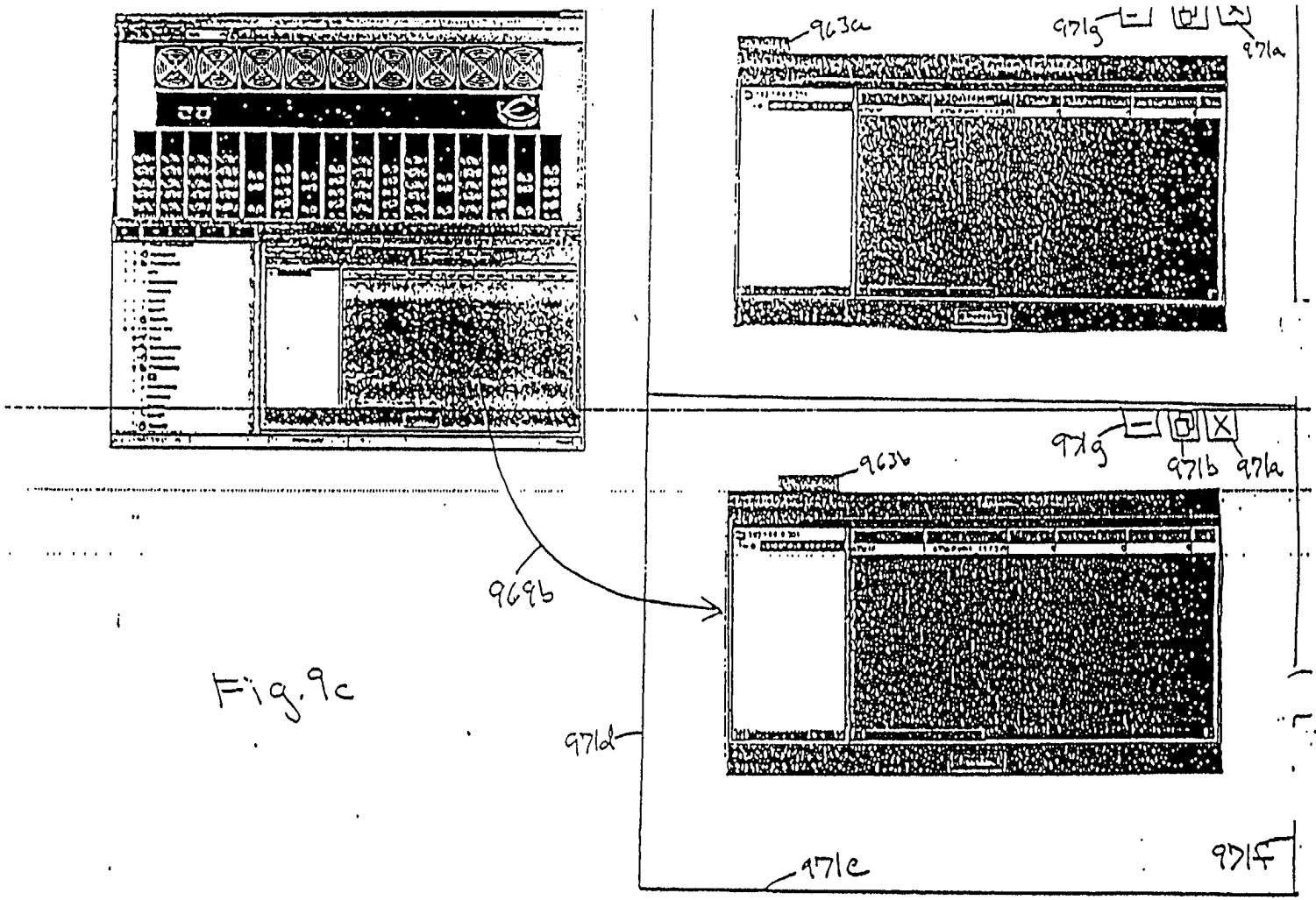

Fig. 9c

Document Preview

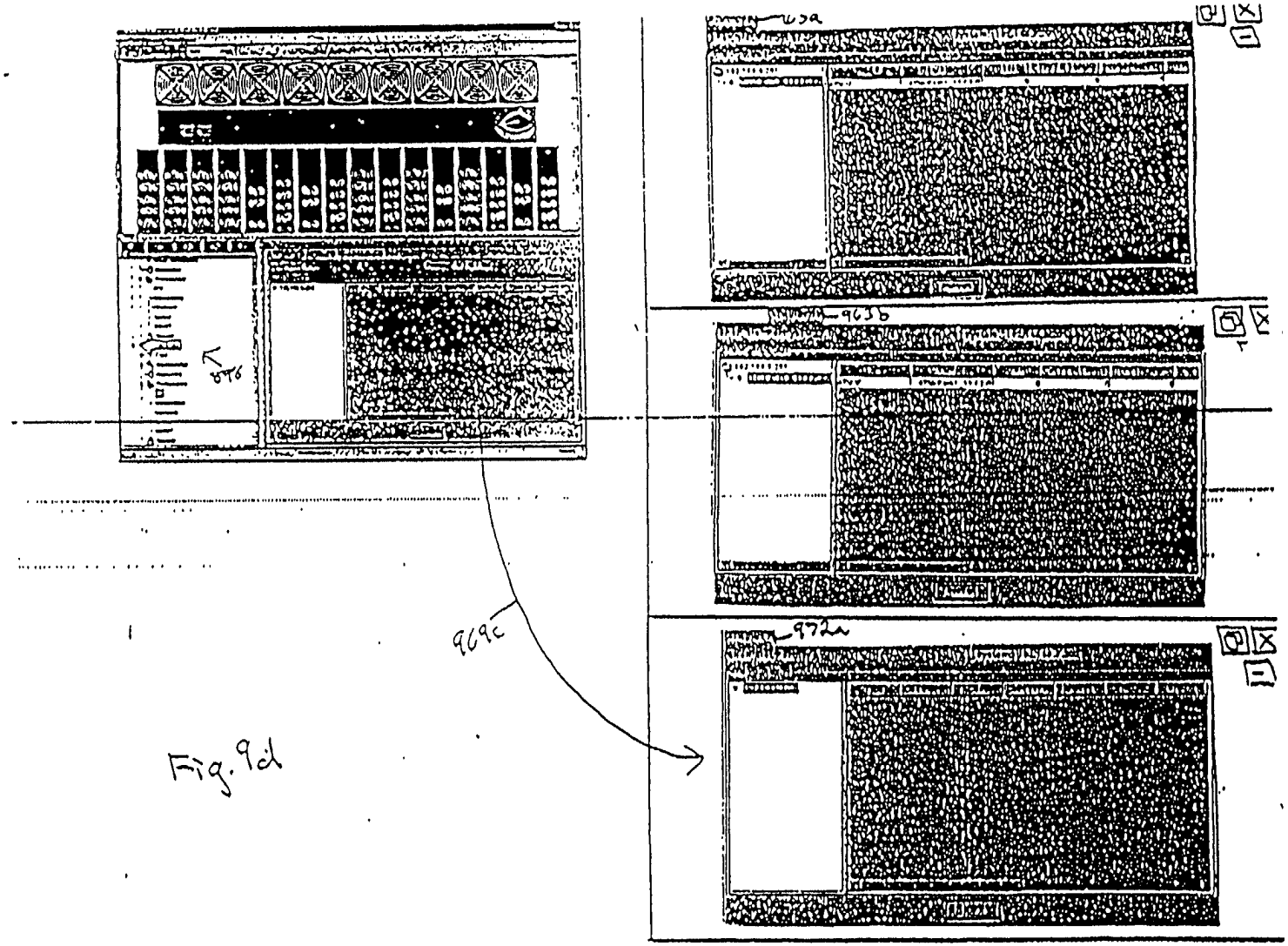

Fig. 9d

DIGITAL DESIGN

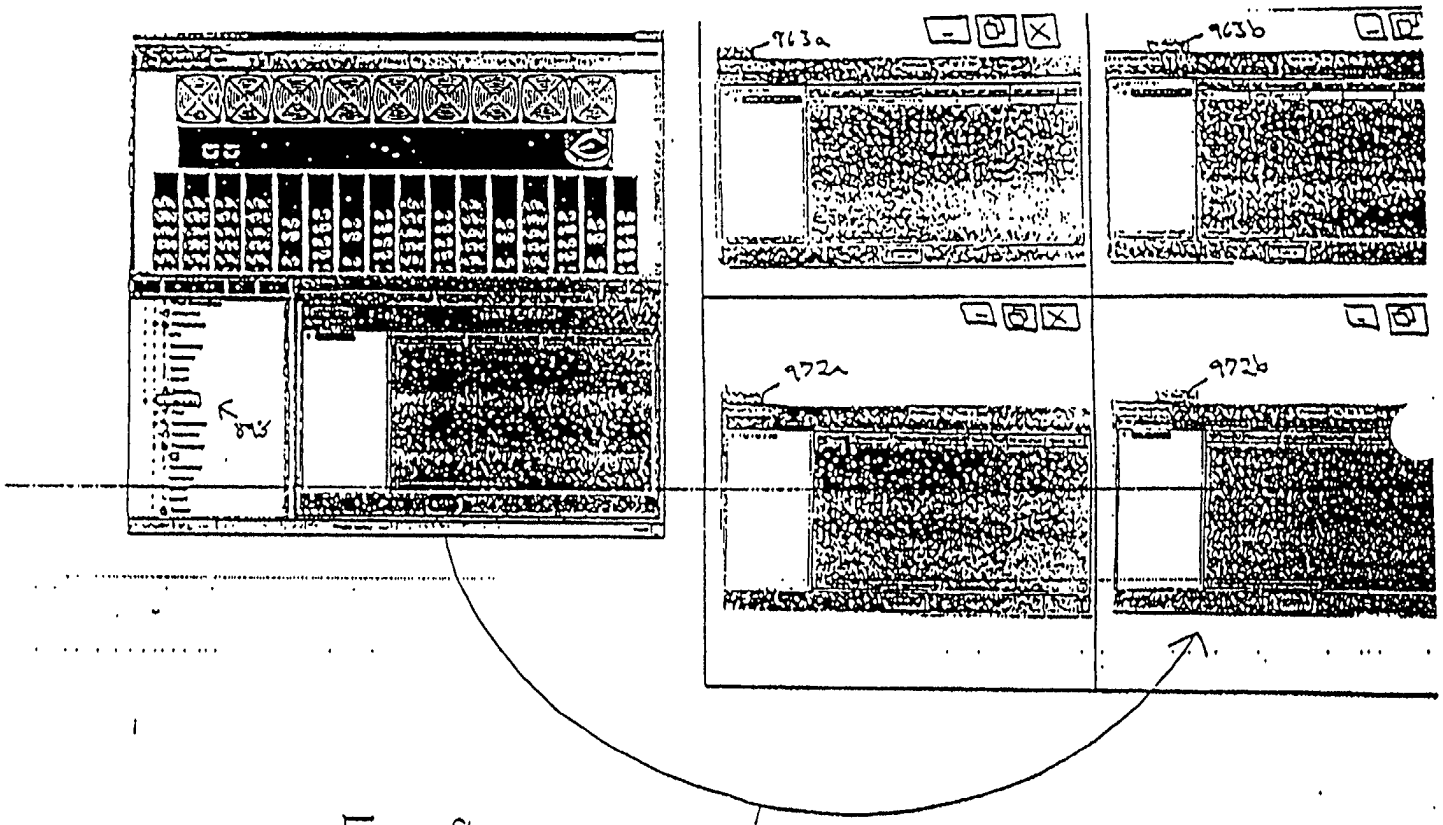

Fig. 9e

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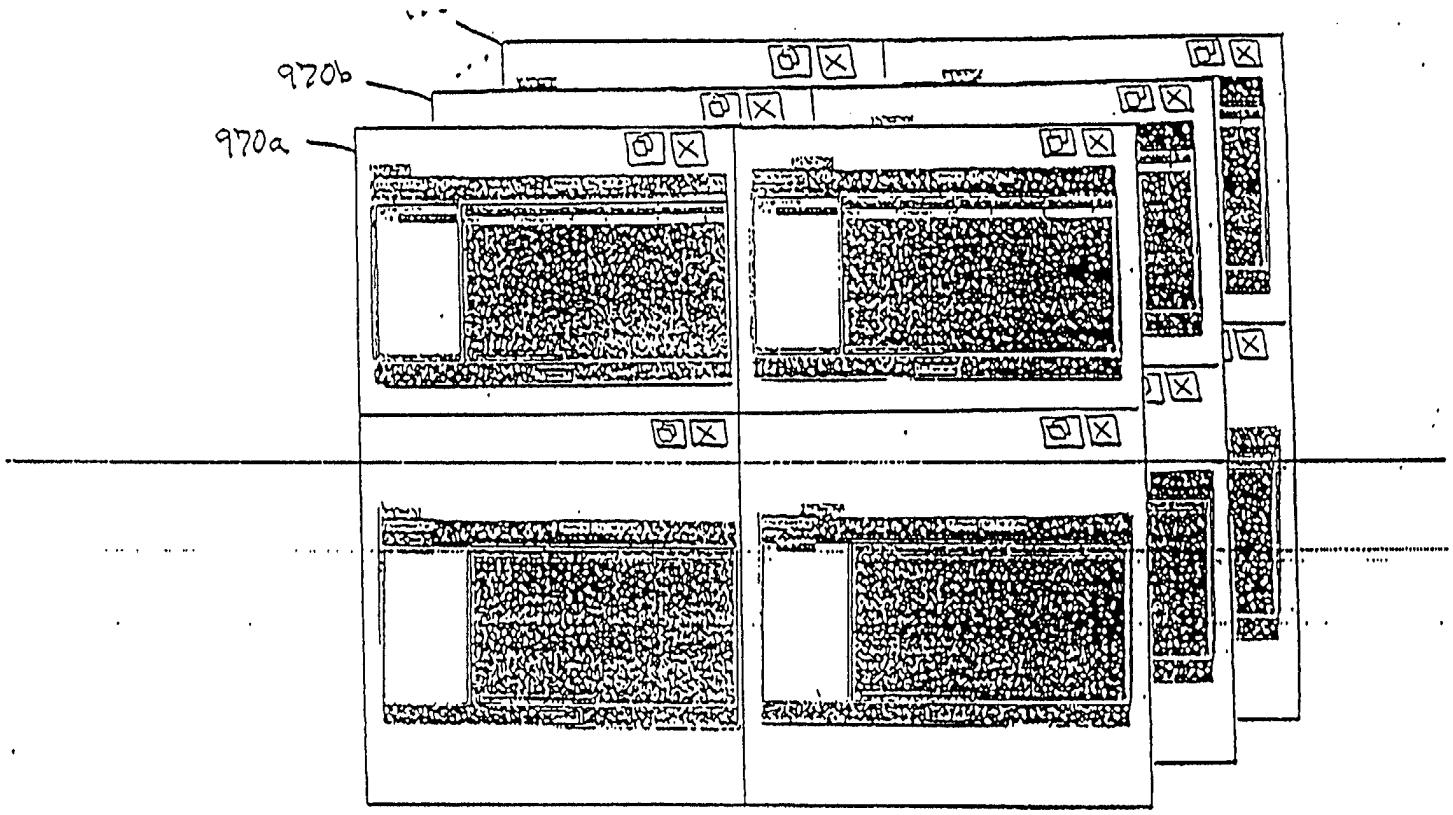

Fig. 9f

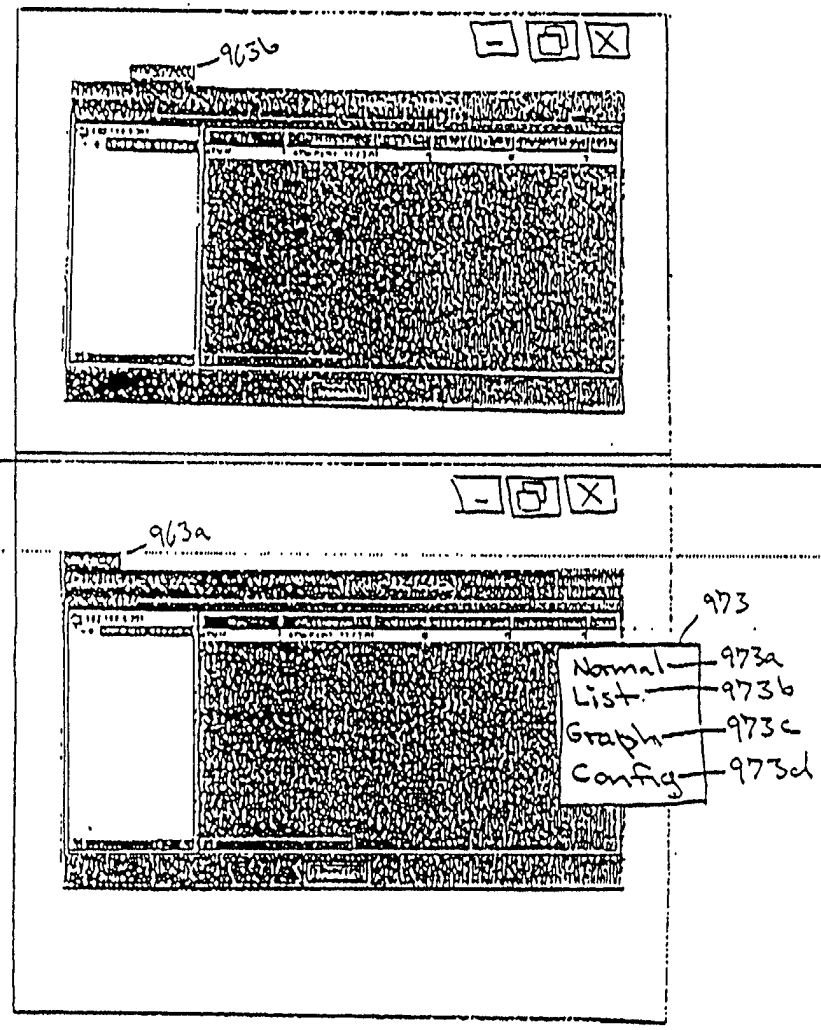

Fig. 9g

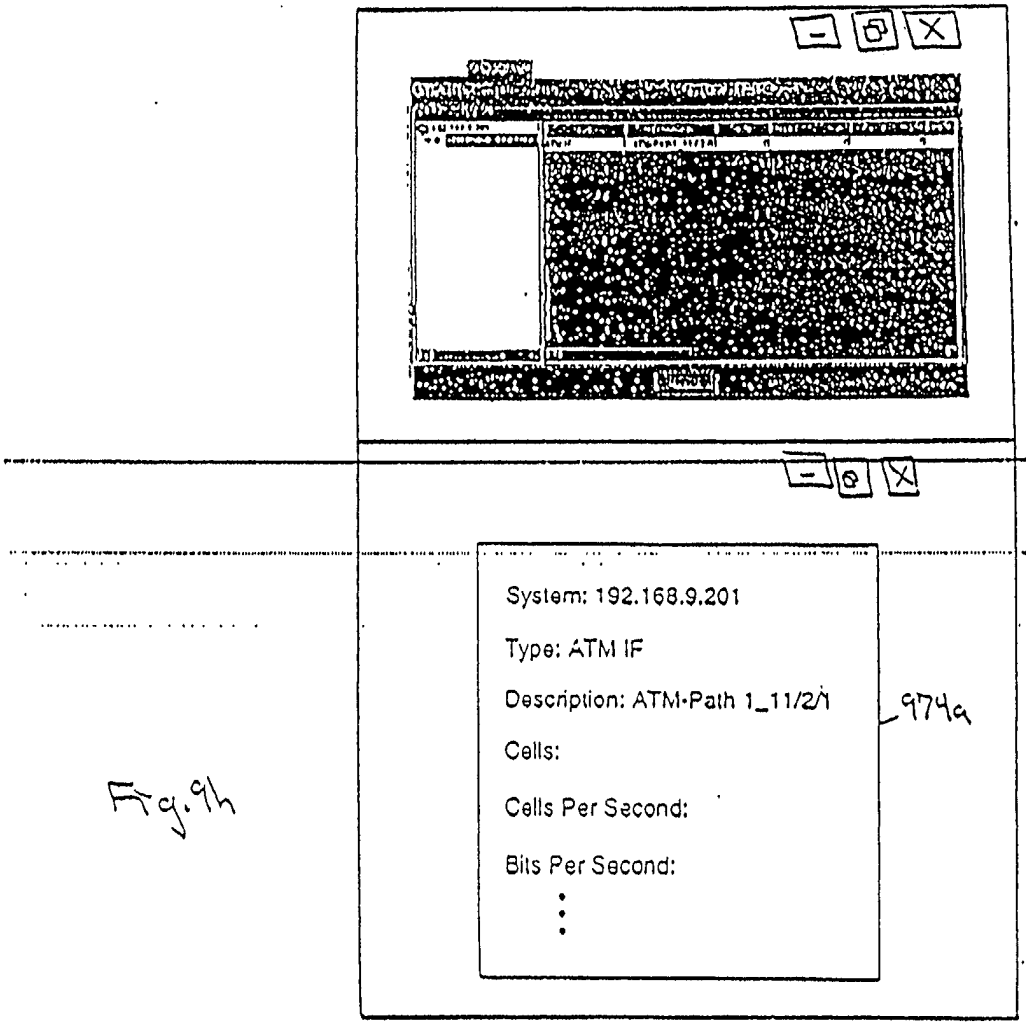
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Fig. 9h

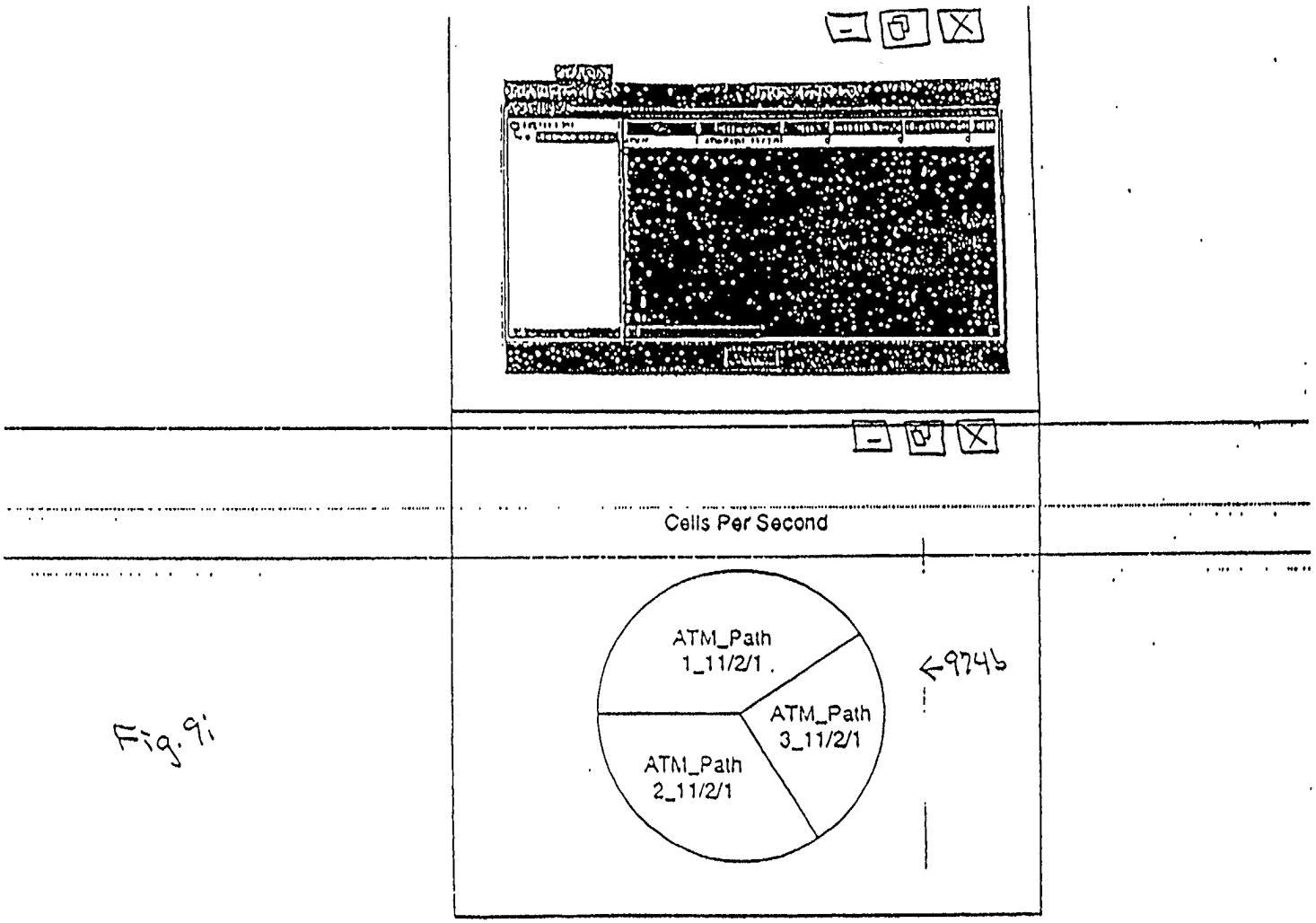
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Fig. 9

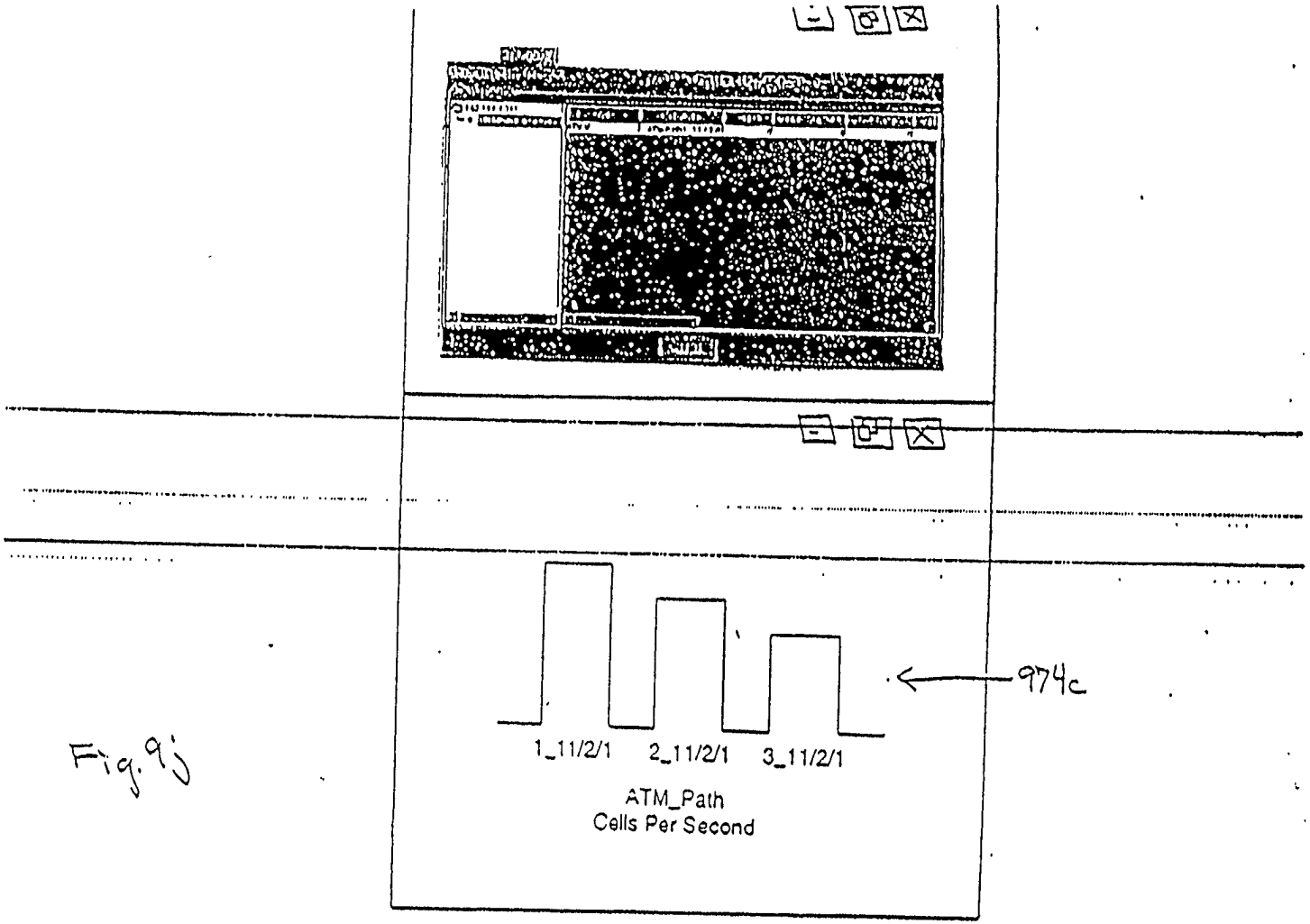

Fig. 9j

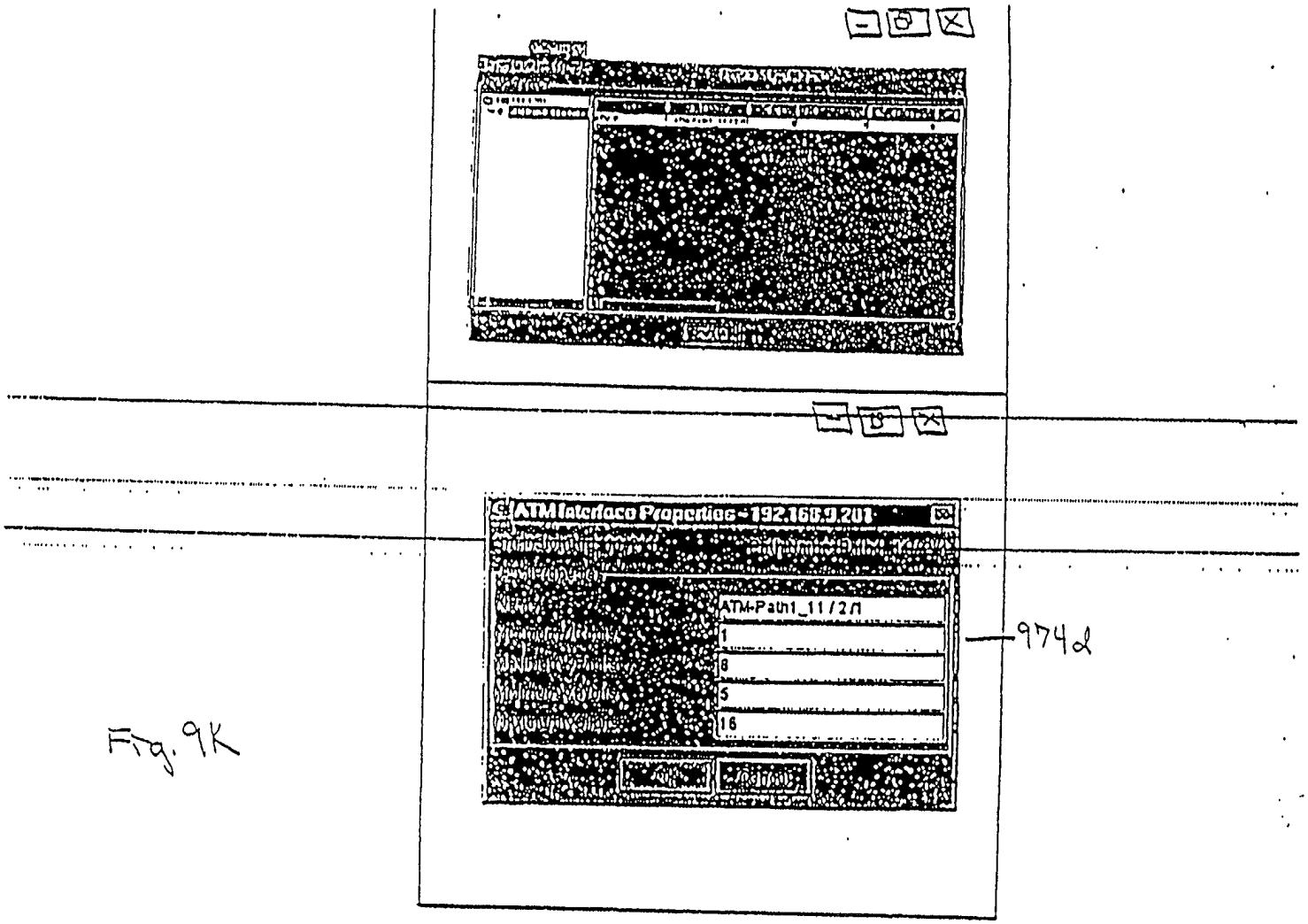
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Fig. 9K

20070-0728360

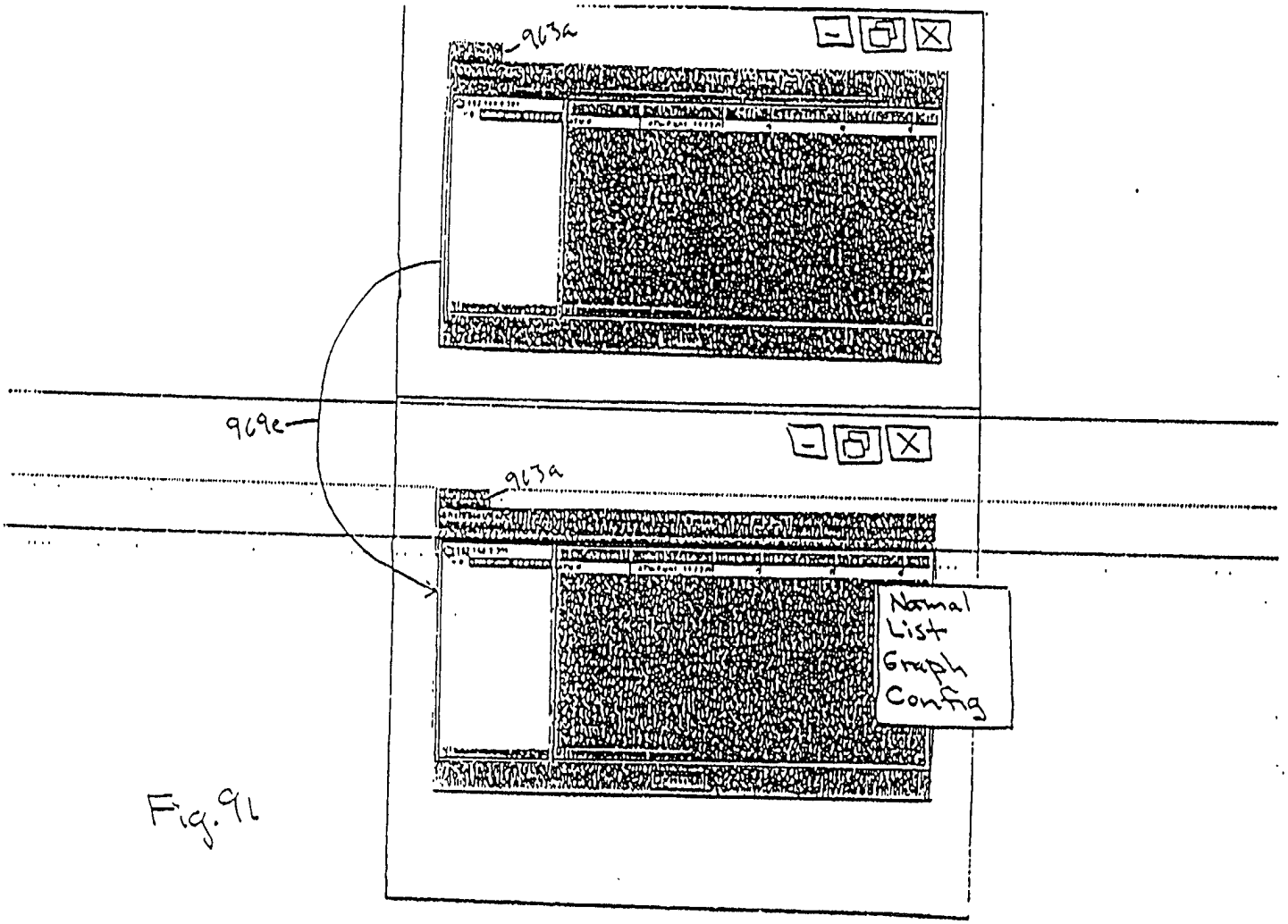

Fig. 9L

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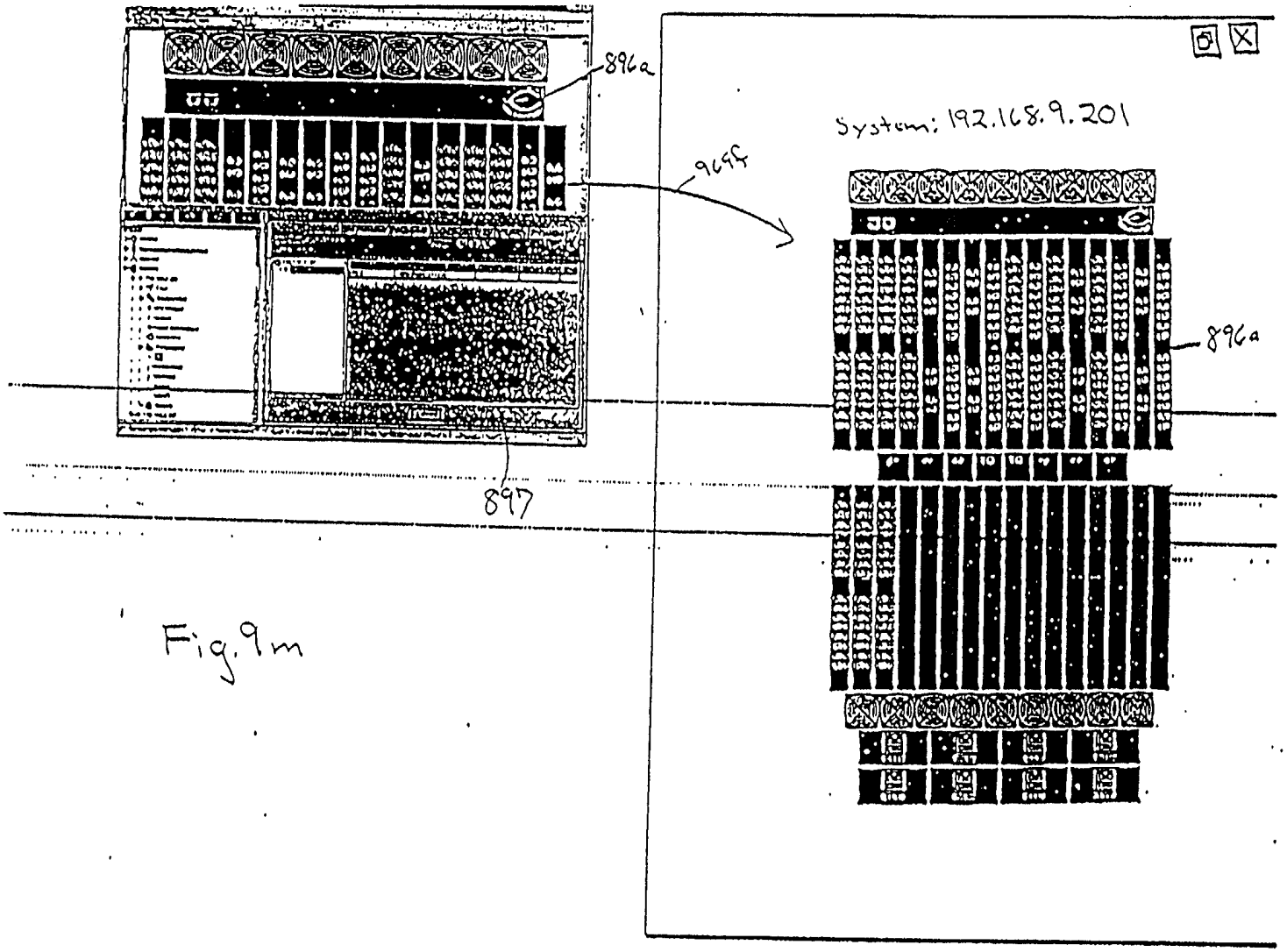

Fig. 9m

TO6740 "0126860

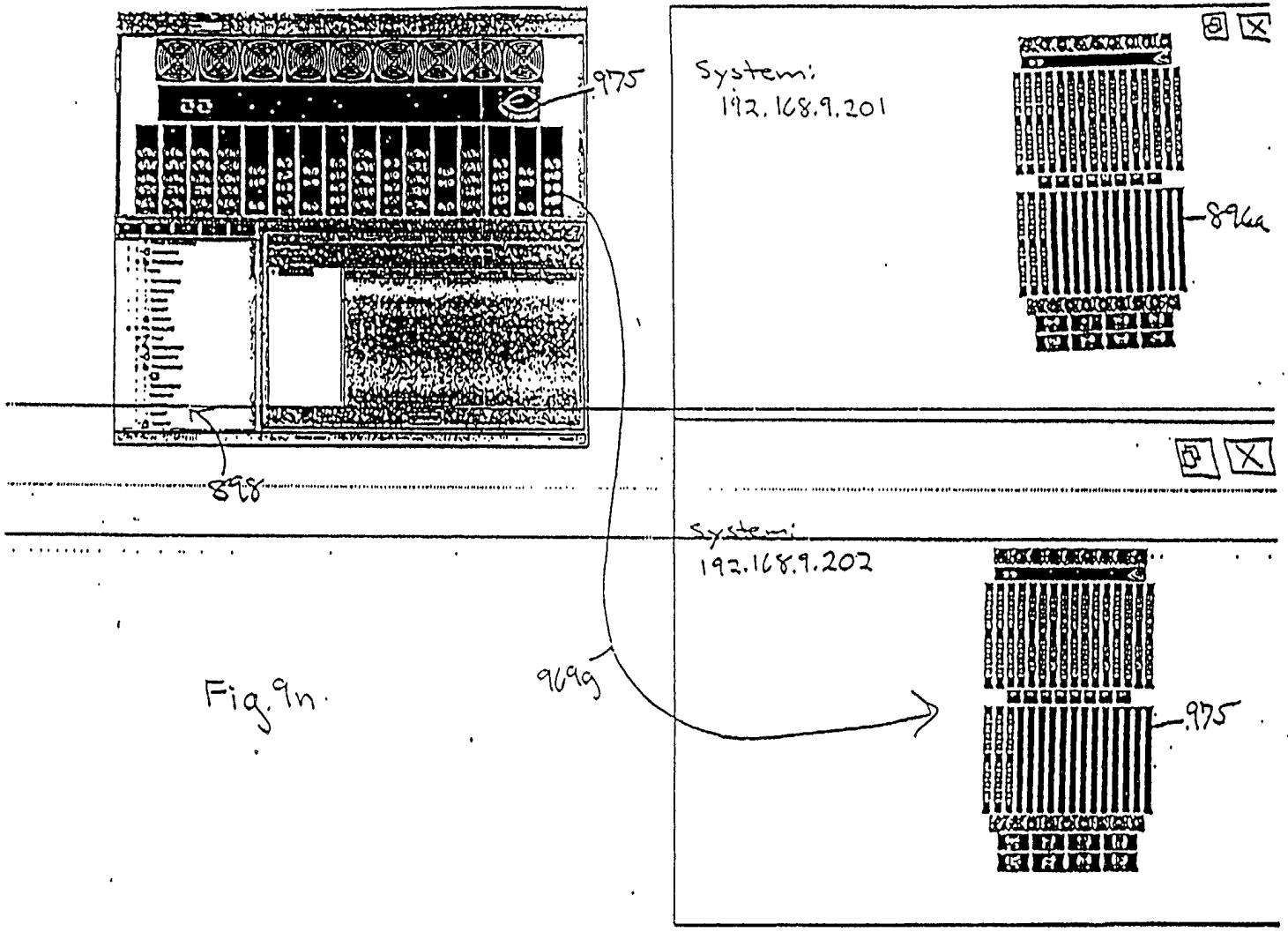

Fig. 9n.

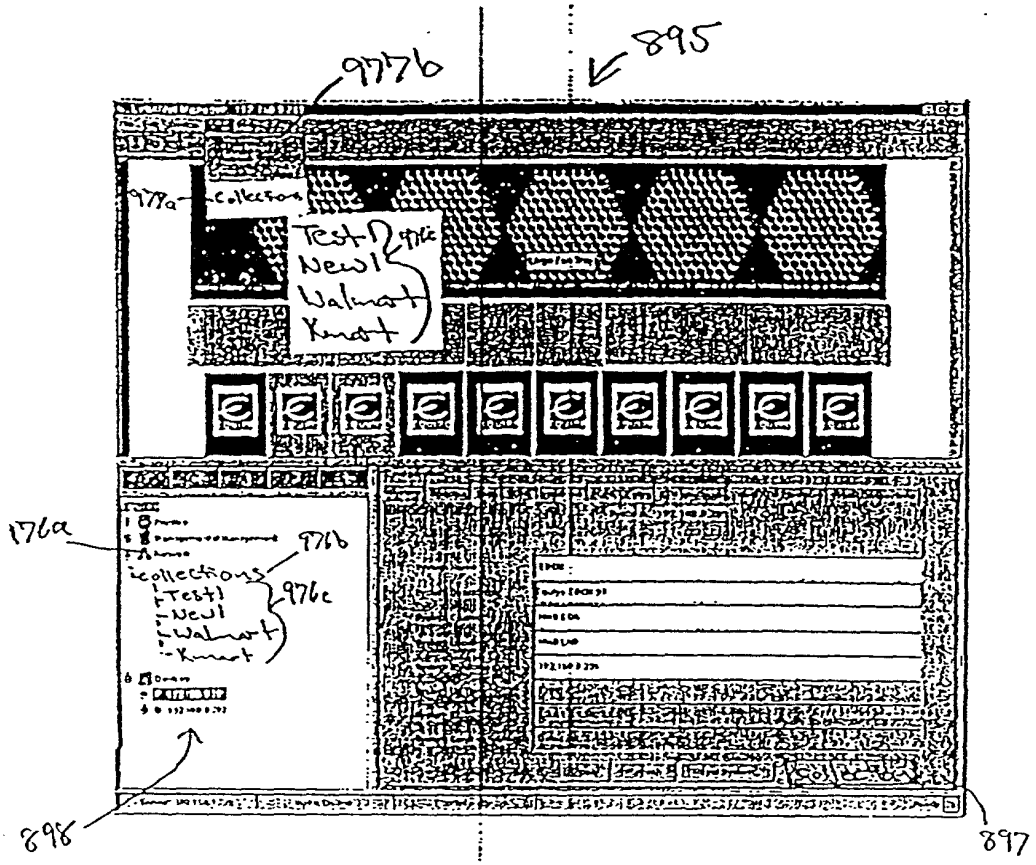
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Fig.10a

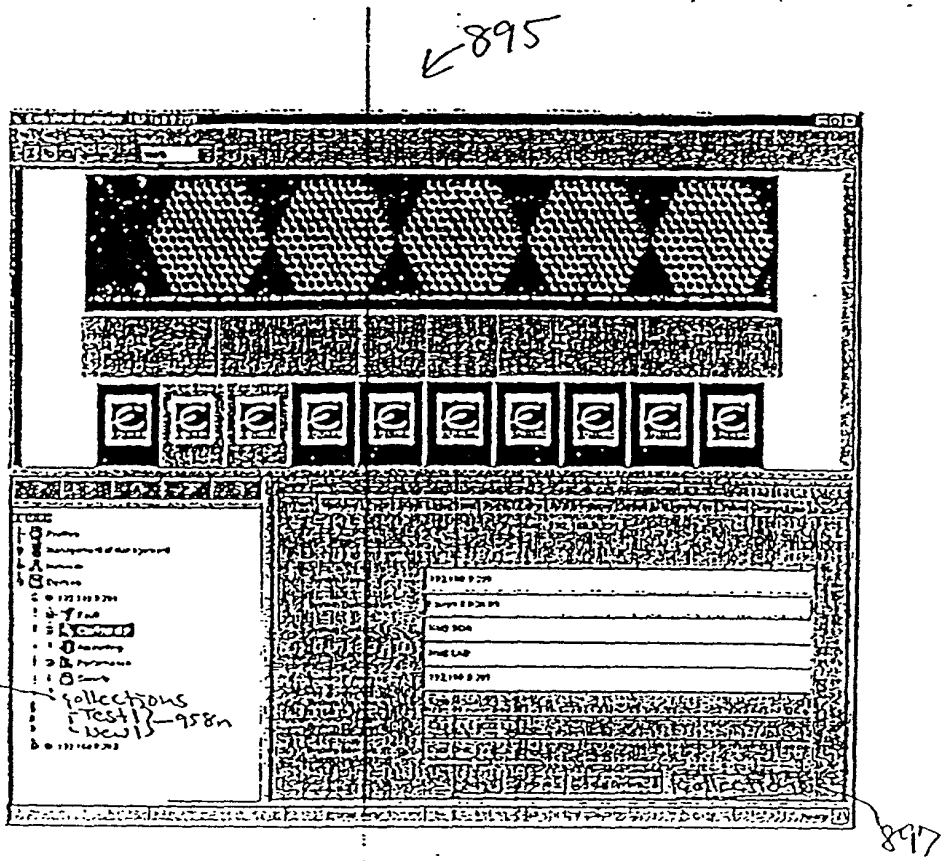


Fig. 10b

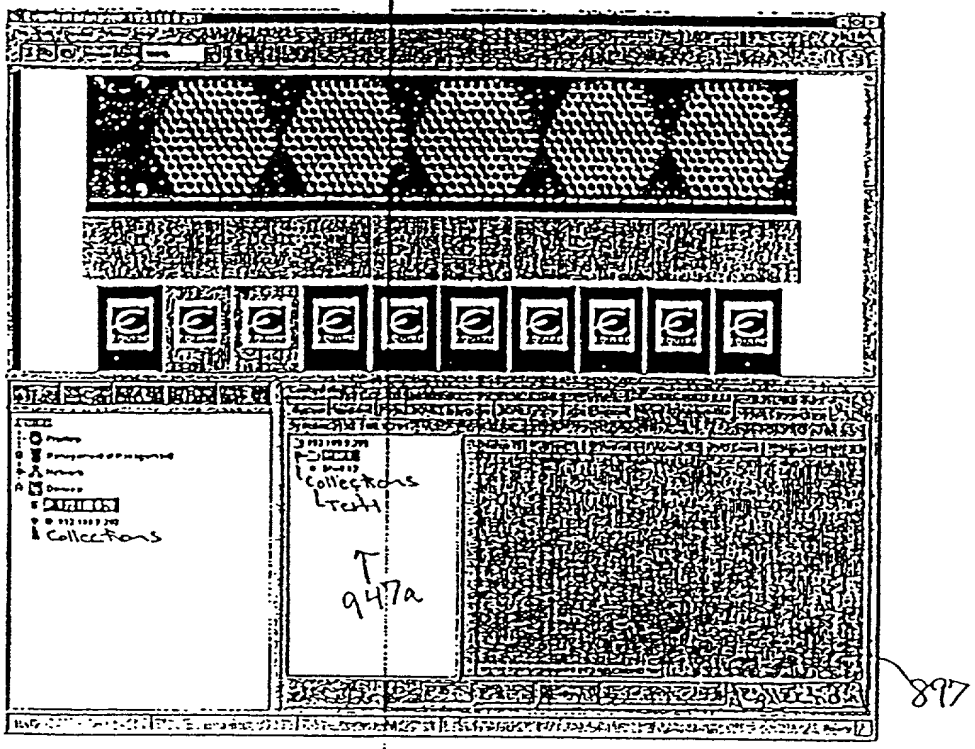


Fig. 10c

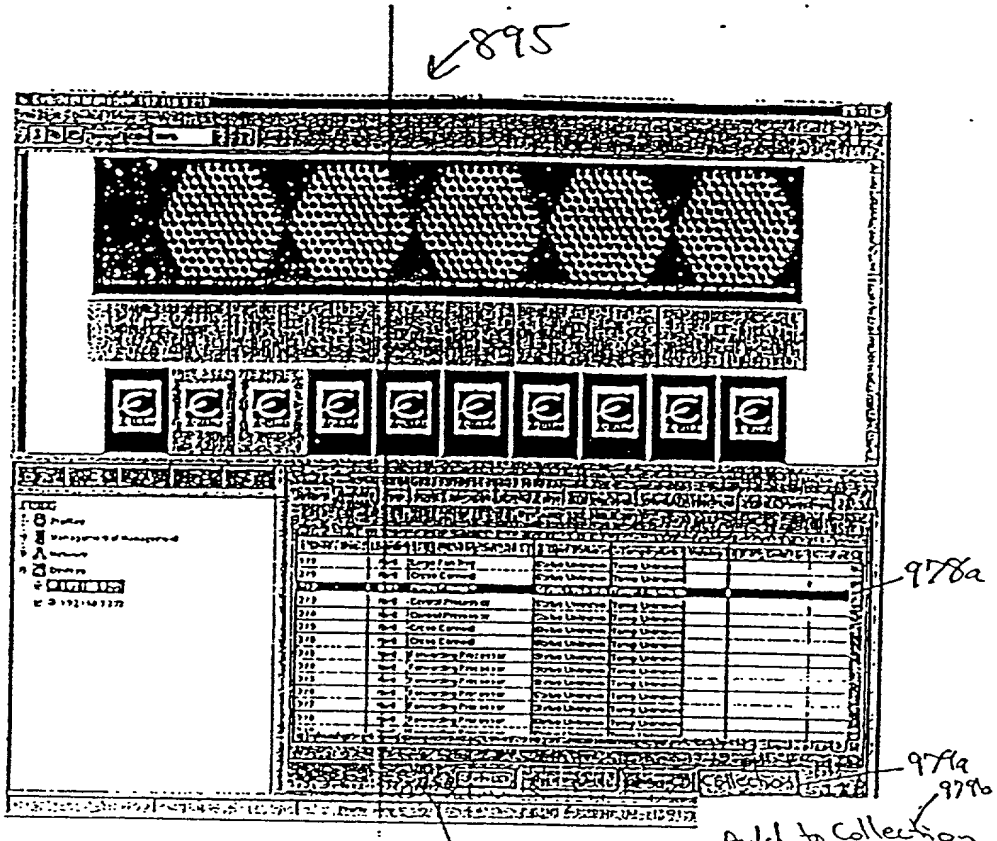


Fig. 10d

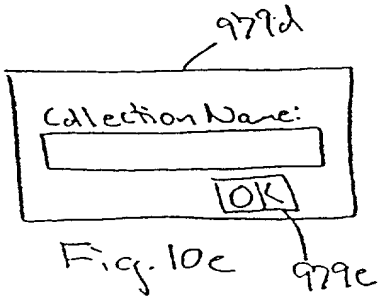


Fig. 10e

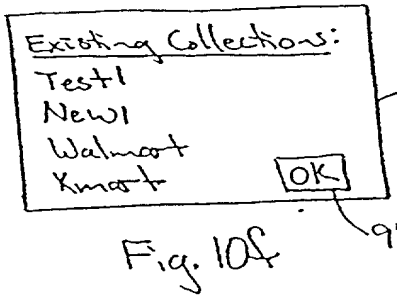


Fig. 10f

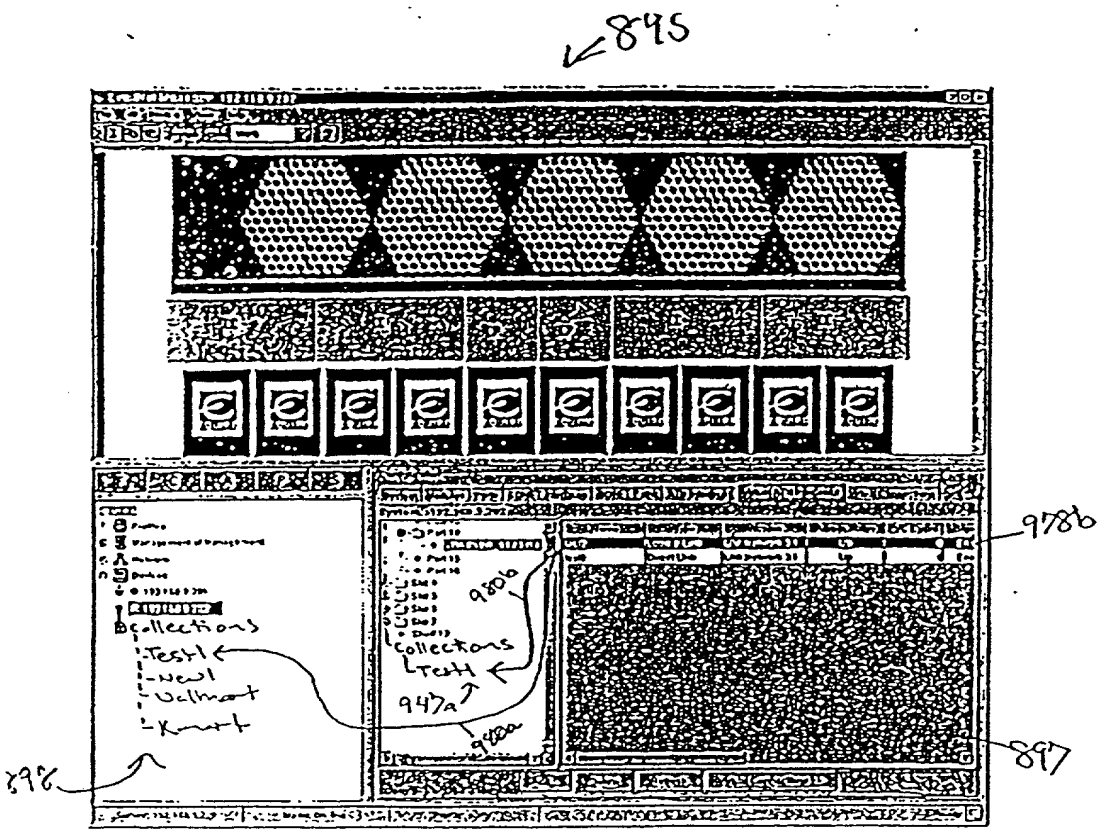


Fig. 10g

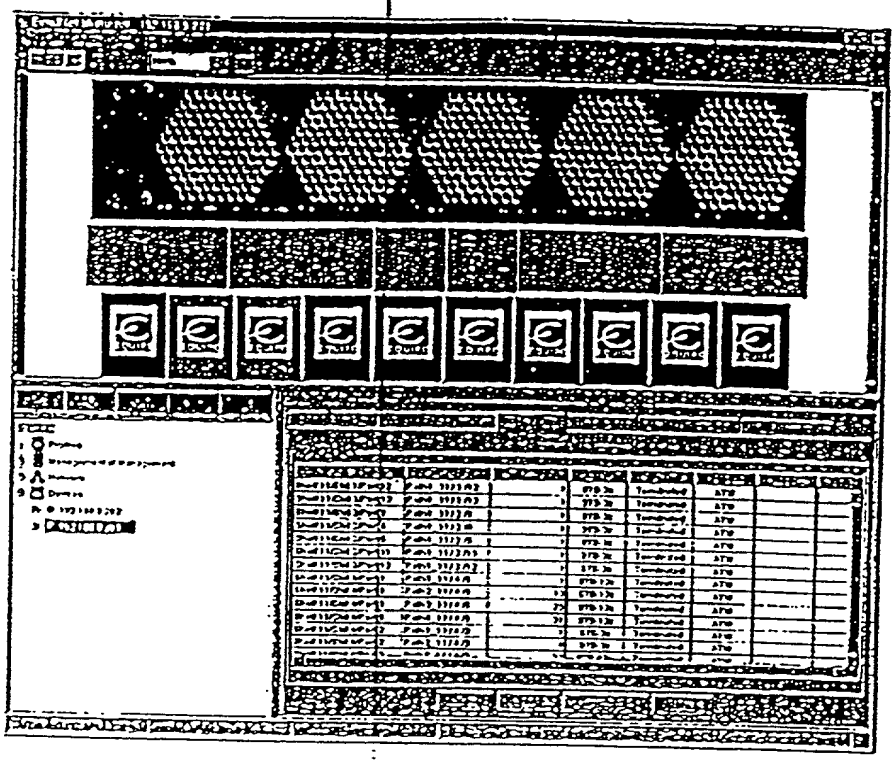


Fig. 10h

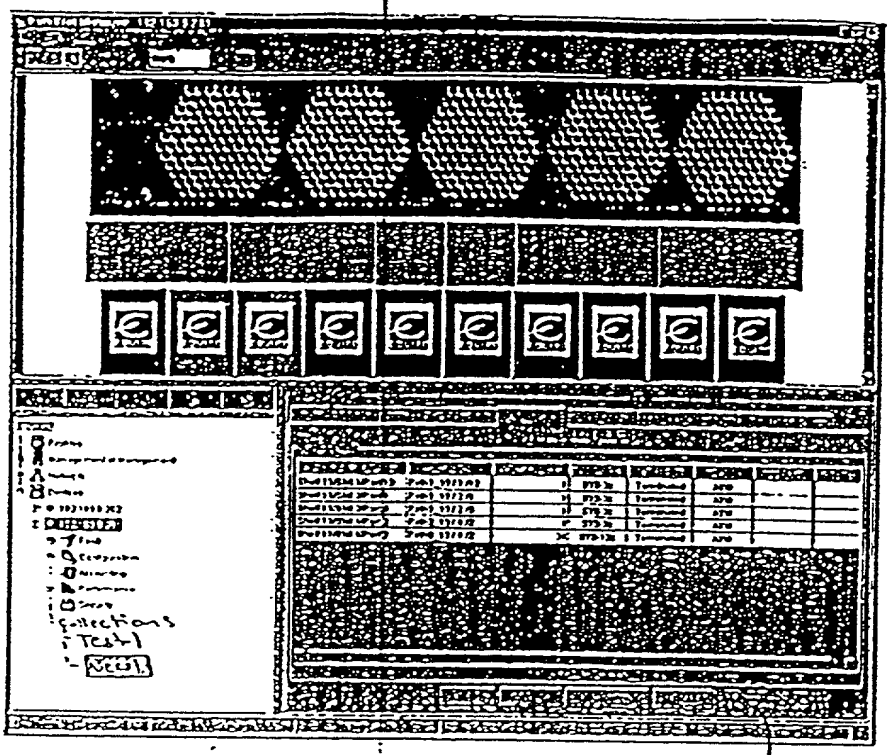


Fig. 10

LUCENT CONFIDENTIAL

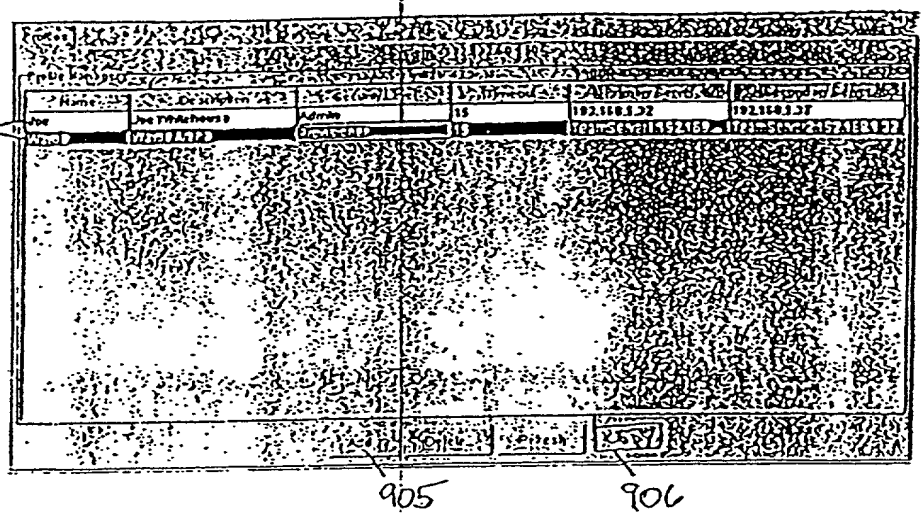


Fig. 11a

EP 1 104 160 A2

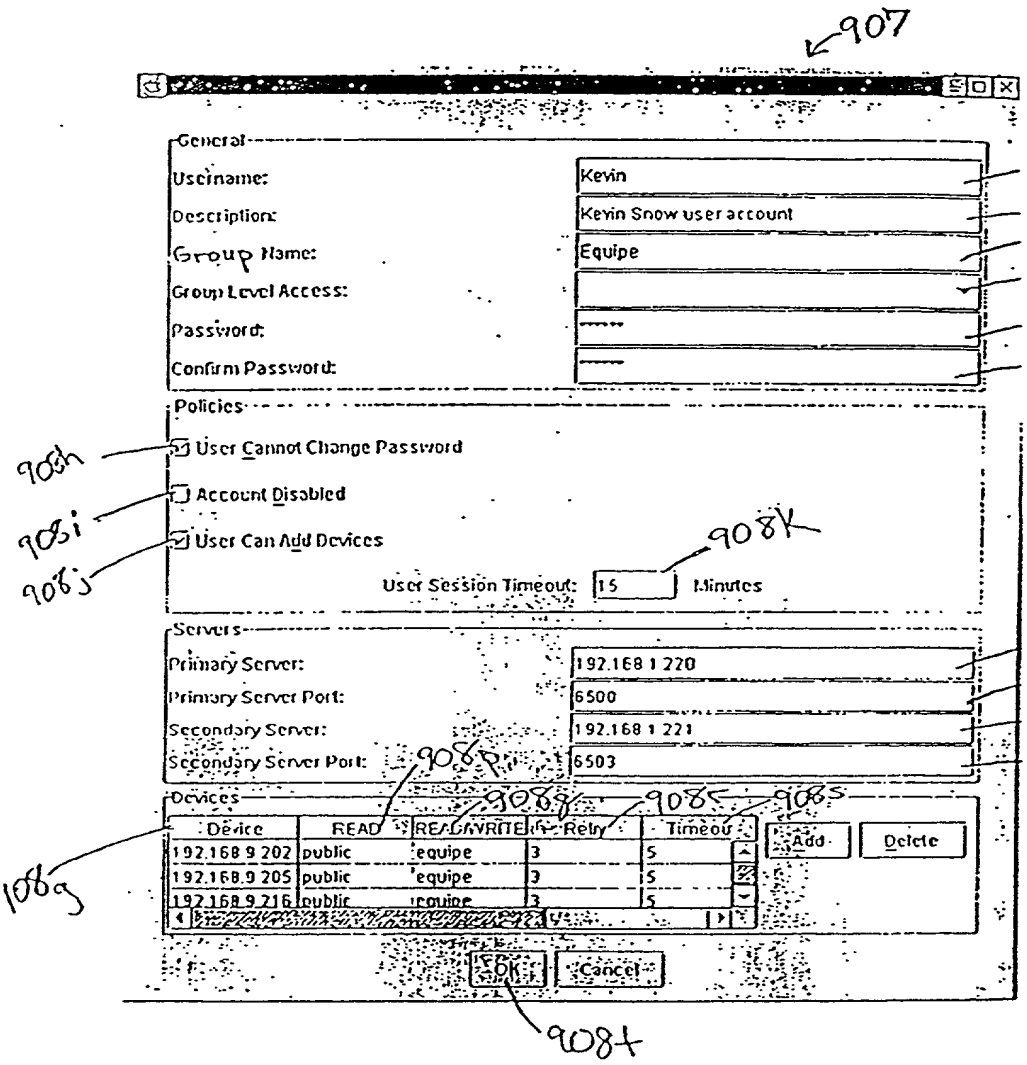
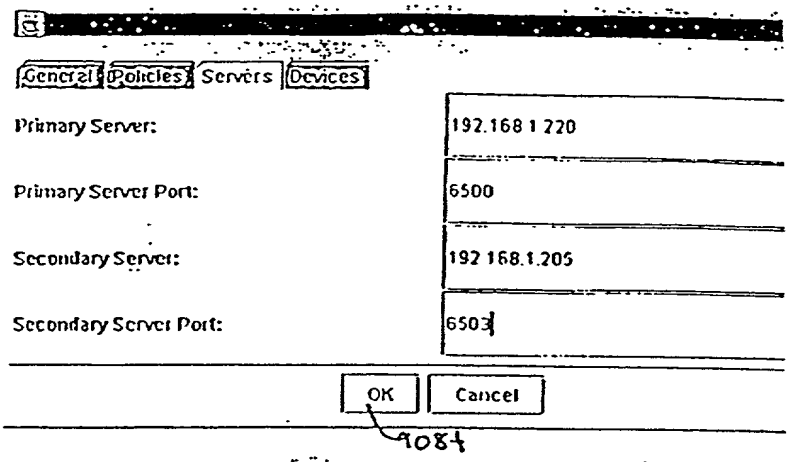

907
General
Username:
Kevin
Description:
Kevin Snow user account
Group Name:
Equipe
Group Level Access:
Password:
Confirm Password:
Policies
User Cannot Change Password
Account Disabled
User Can Add Devices
User Session Timeout:
15
Minutes
908k
908i
908j
Servers
Primary Server:
192.168.1.220
Primary Server Port:
6500
Secondary Server:
192.168.1.221
Secondary Server Port:
6503
Devices
Device
READ
READ/WRITE
Retry
Timeout
192.168.9.202
public
equipe
3
5
192.168.9.205
public
equipe
3
5
192.168.9.216
public
equipe
3
5
Add
Delete
OK
Cancel
908p
908g
908f
908e
908s
908h
908t

Fig. 11b

Fig.11c



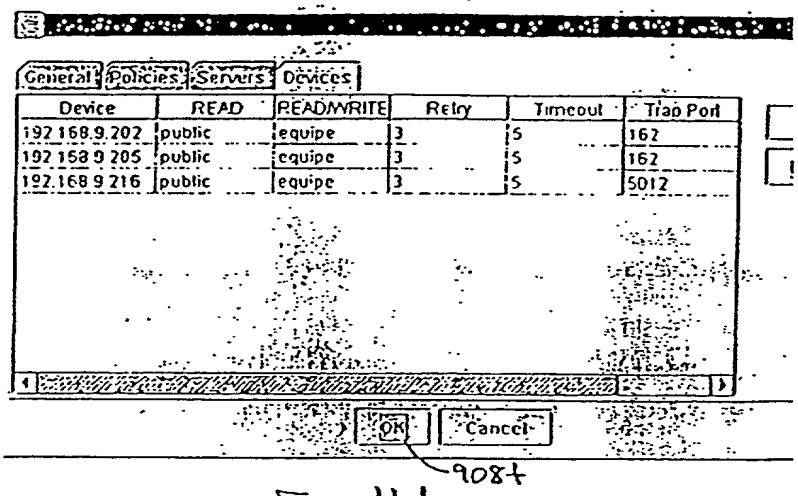
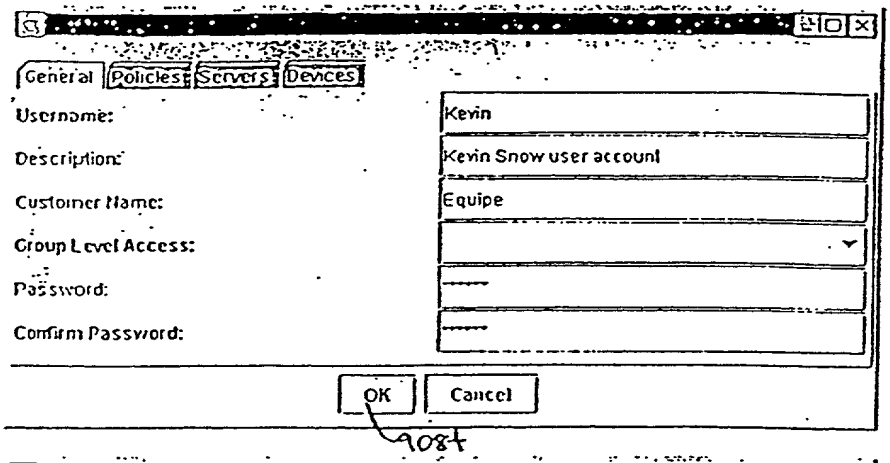


Fig.11d

Exhibit 1 Page 10 of 36

Fig.11e



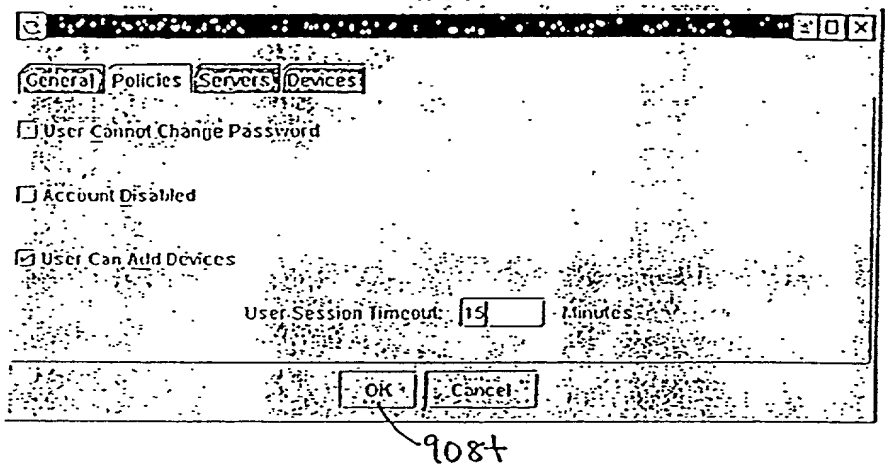


Fig.11f

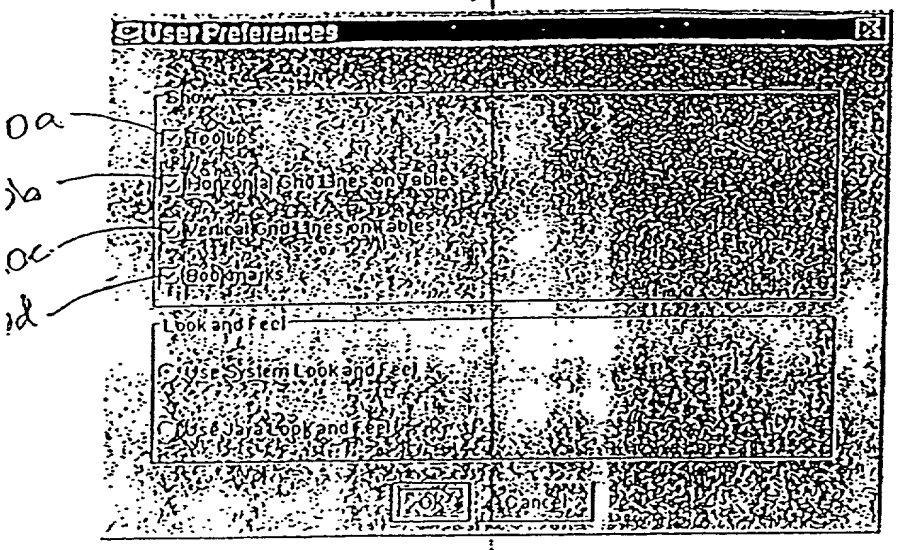

User Preferences
Show
Tool Tips
Horizontal Grid Lines on Tables
Vertical Grid Lines on Tables
Bookmarks
Look and Feel
Use System Look and Feel
Use Java Look and Feel
OK
Cancel
10a
10b
10c
10d

Fig. 11g

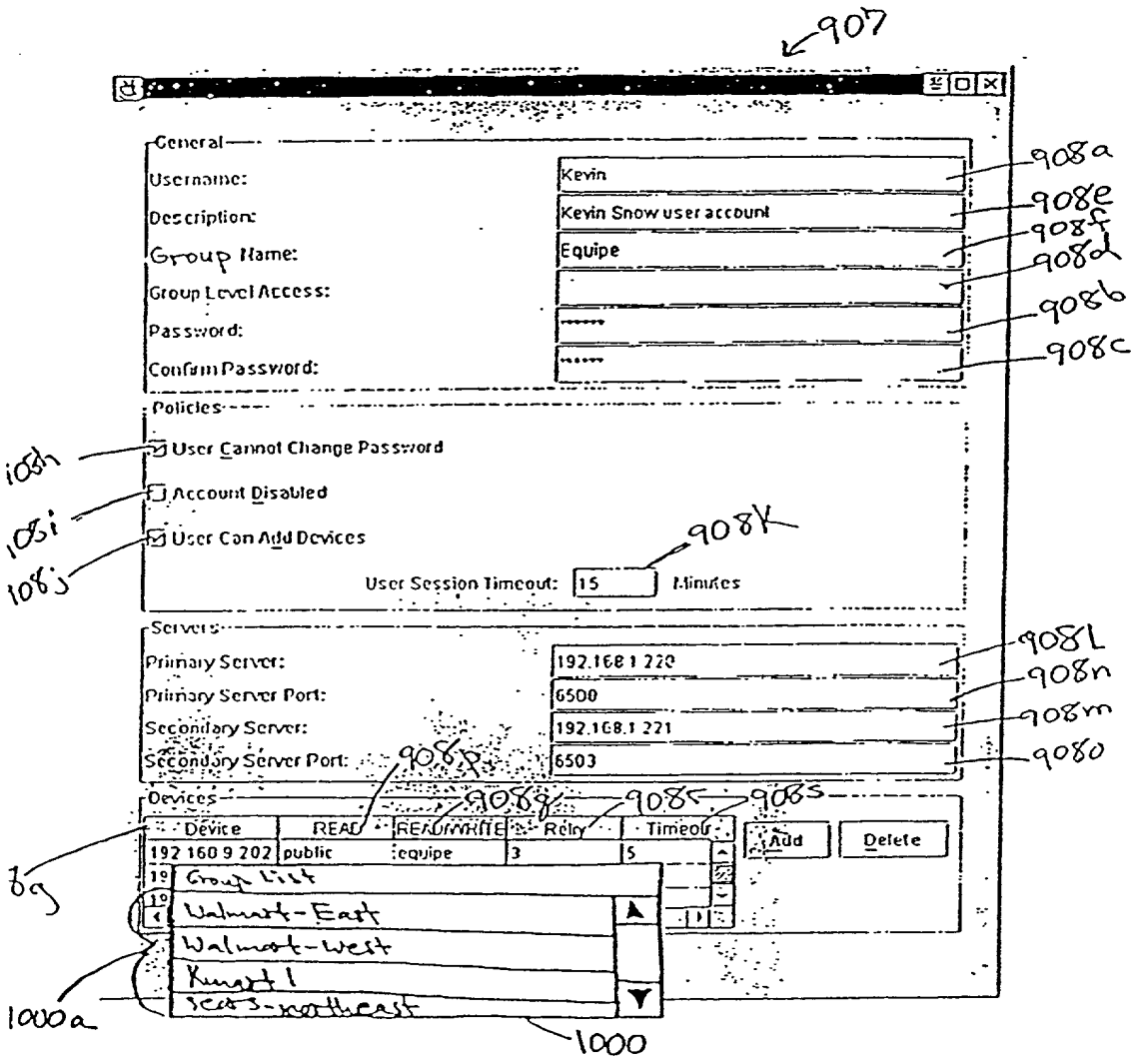

907
General
Username:
Kevin
908a
Description:
Kevin Snow user account
908e
Group Name:
Equipe
908f
Group Level Access:
908d
Password:
908b
Confirm Password:
908c
Policies
User Cannot Change Password
108h
Account Disabled
108i
User Can Add Devices
108j
908k
User Session Timeout:
15
Minutes
Servers
Primary Server:
192.168.1.220
908l
Primary Server Port:
6500
908n
Secondary Server:
192.168.1.221
908m
Secondary Server Port:
6503
908o
908p
908q
908r
908t
908s
Devices
Device
READ
READ/WRITE
Retry
Timeout
Add
Delete
192.168.9.202
public
equipe
3
5
19
Group List
Walmart-East
Walmart-West
Kmart1
Sears-northeast
108g
1000a
1000

Fig. 11h

Fig. 11i

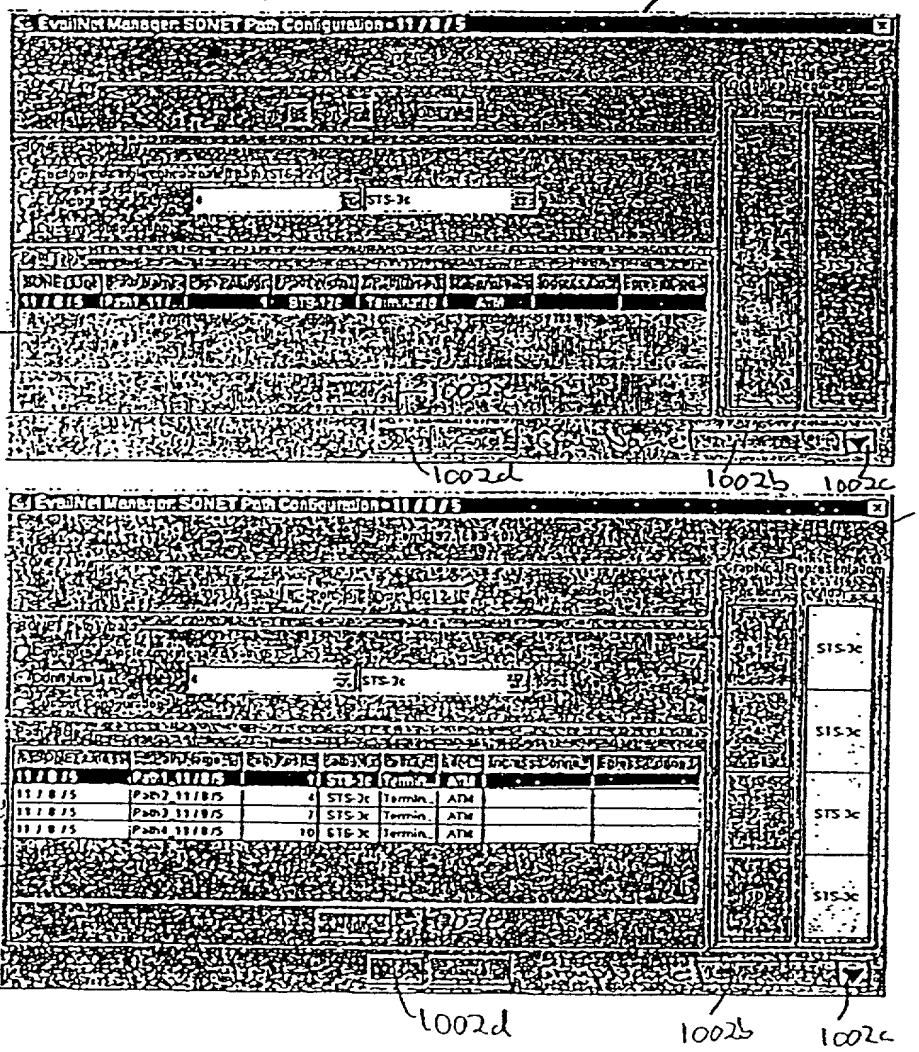
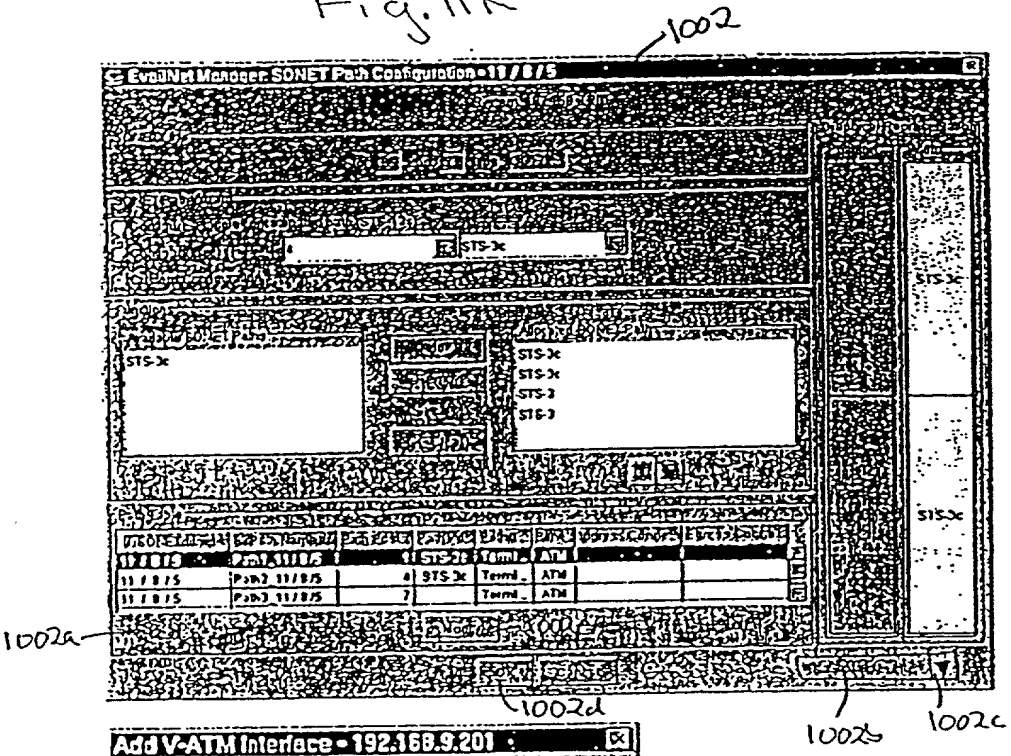


Fig. 11j

Fig. 11K



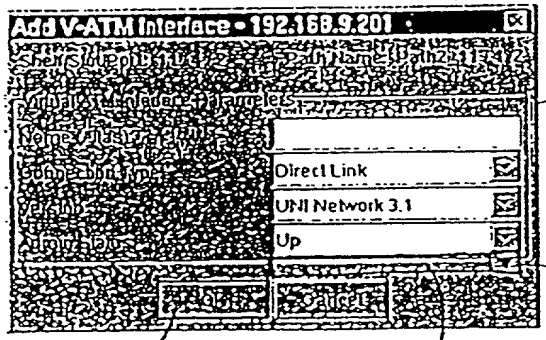


Fig. 11n

Fig. 11L

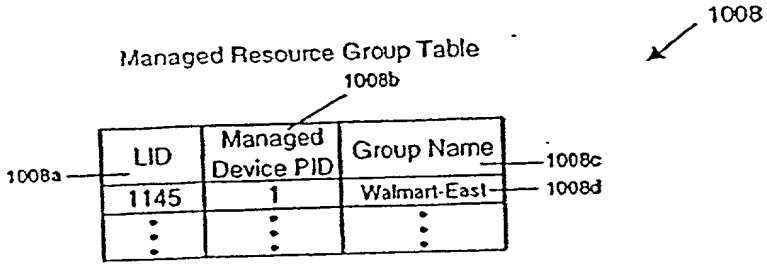
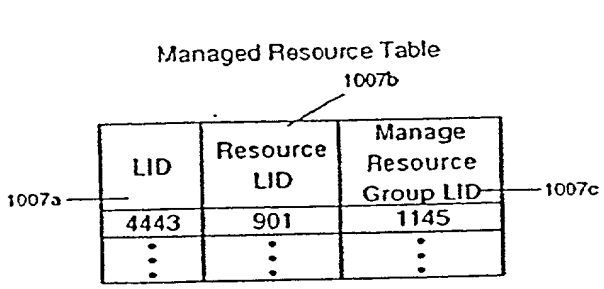


Fig. 11M



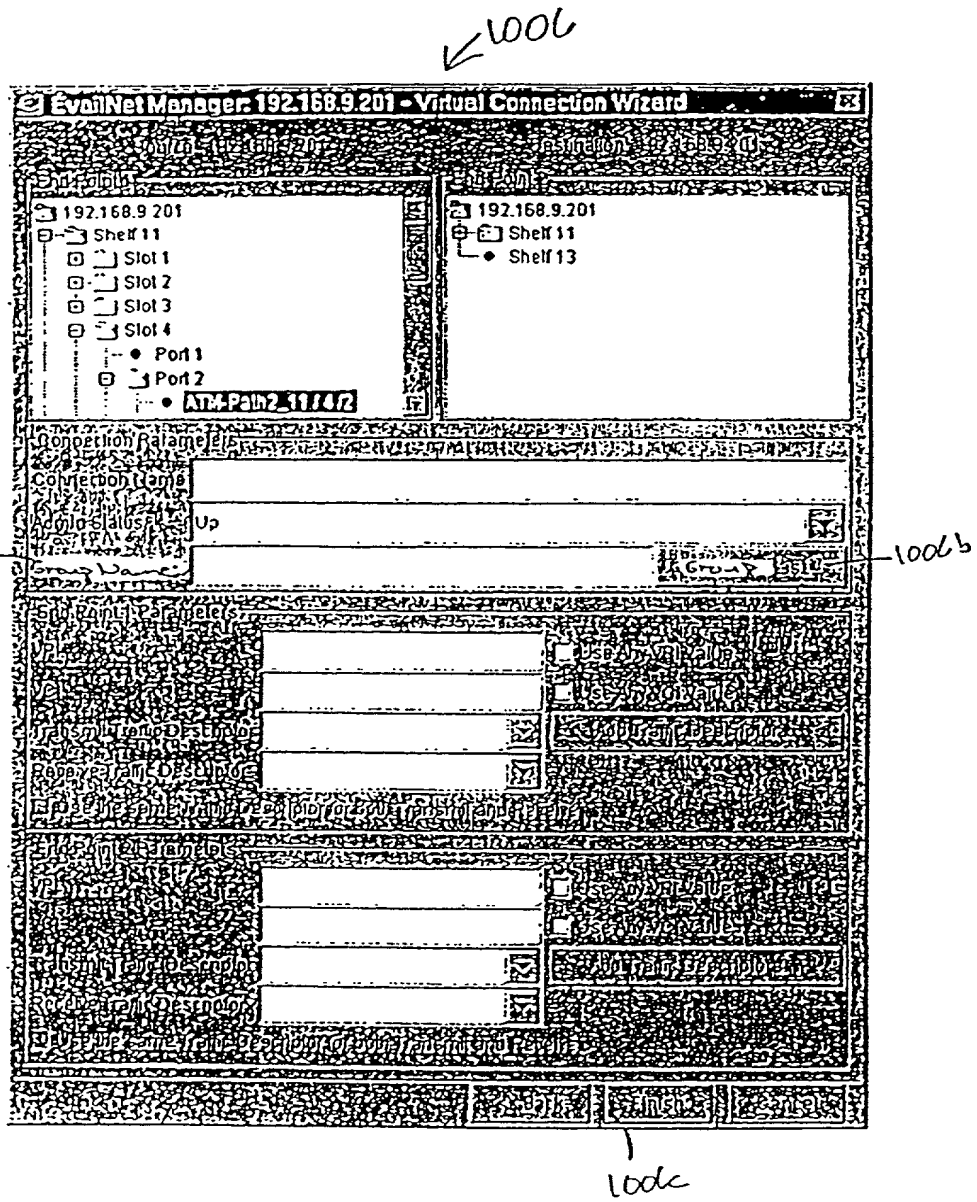

1006
EvaliNet Manager: 192.168.9.201 - Virtual Connection Wizard
192.168.9.201
Shelf 11
Slot 1
Slot 2
Slot 3
Slot 4
Port 1
Port 2
192.168.9.201
Shelf 11
Shelf 13
Up
1006a
1006b
1006c

Fig. 11o

Fig. 11p

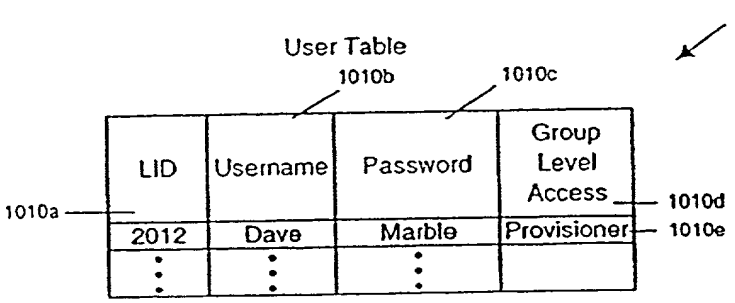


Fig. 11q

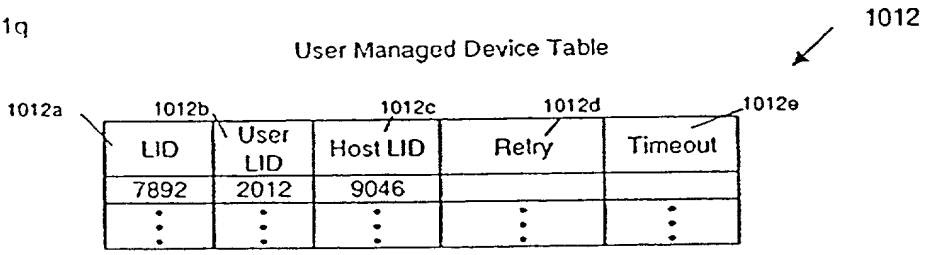


Fig. 11r

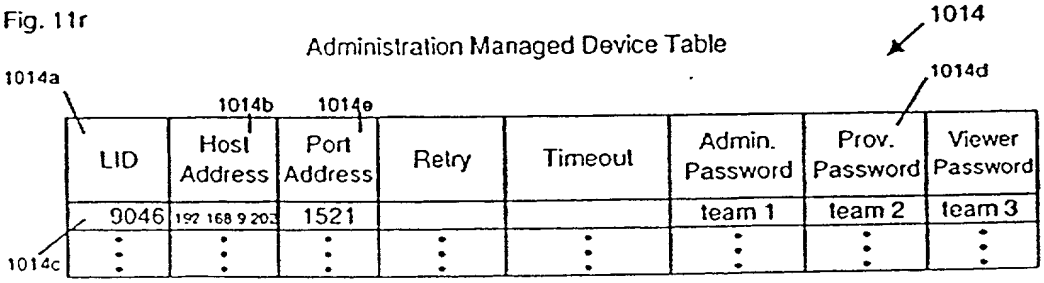


Fig. 11s

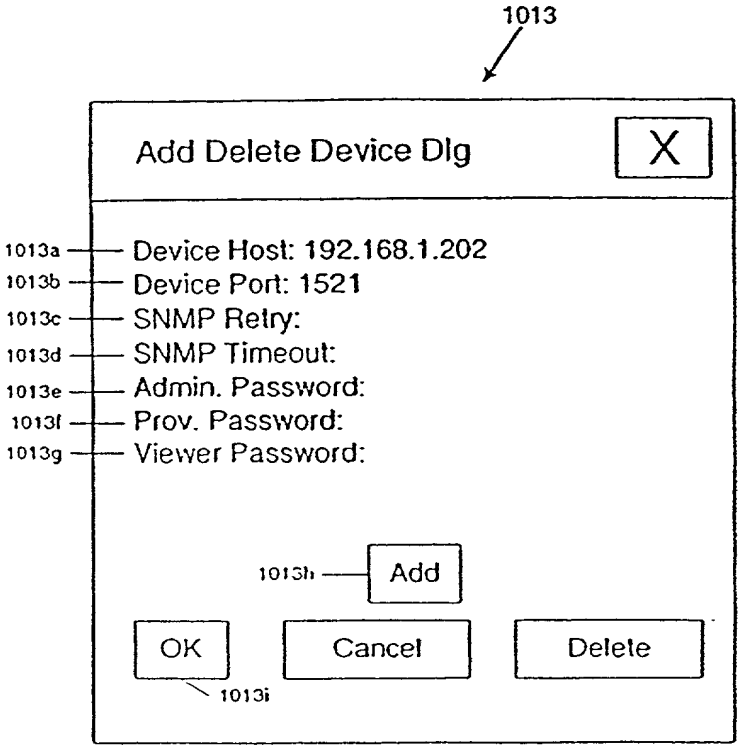

1013
Add Delete Device Dlg
X
1013a
Device Host: 192.168.1.202
1013b
Device Port: 1521
1013c
SNMP Retry:
1013d
SNMP Timeout:
1013e
Admin. Password:
1013f
Prov. Password:
1013g
Viewer Password:
1013h
Add
OK
Cancel
Delete
1013i

Fig. 11t

User Resource Group Map Table

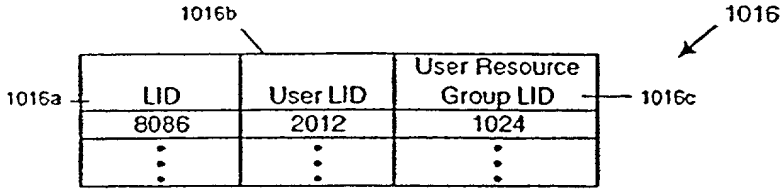


Fig. 11u

User Resource Group Table

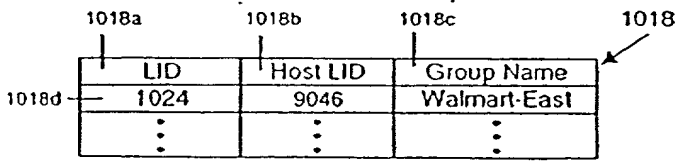


Fig. 11v

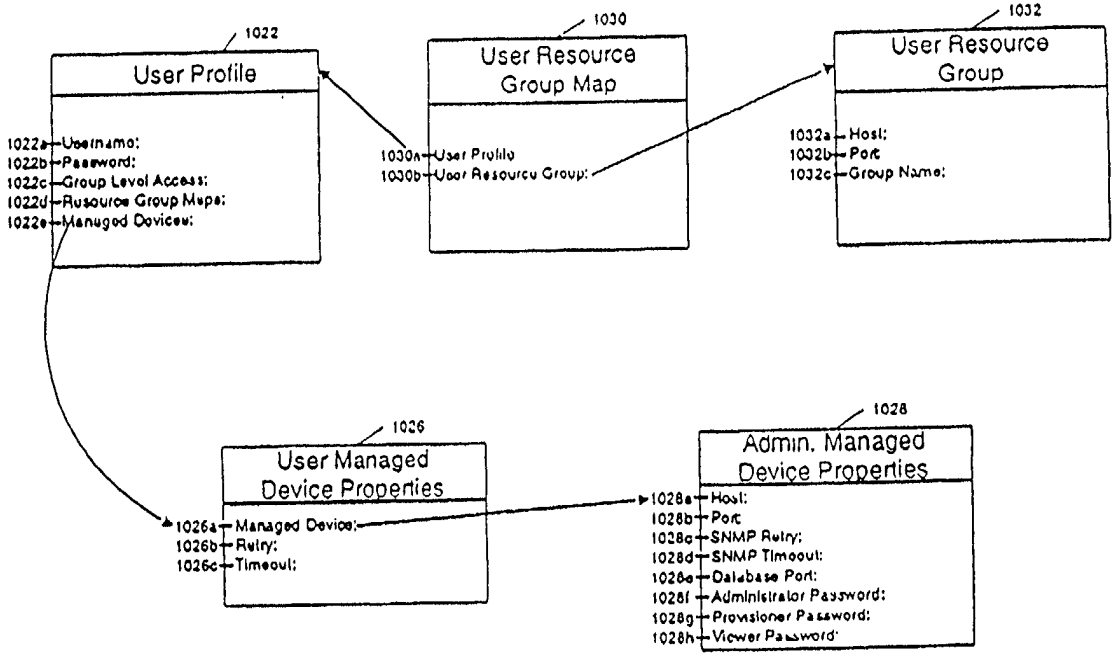

1022
User Profile
1022a Username:
1022b Password:
1022c Group Level Access:
1022d Resource Group Maps:
1022e Managed Devices:
1030
User Resource Group Map
1030a User Profile
1030b User Resource Group:
1032
User Resource Group
1032a Host:
1032b Port
1032c Group Name:
1026
User Managed Device Properties
1026a Managed Device:
1026b Retry:
1026c Timeout:
1028
Admin. Managed Device Properties
1028a Host:
1028b Port
1028c SNMP Retry:
1028d SNMP Timeout:
1028e Database Port:
1028f Administrator Password:
1028g Provisioner Password:
1028h Viewer Password:

Fig. 11w

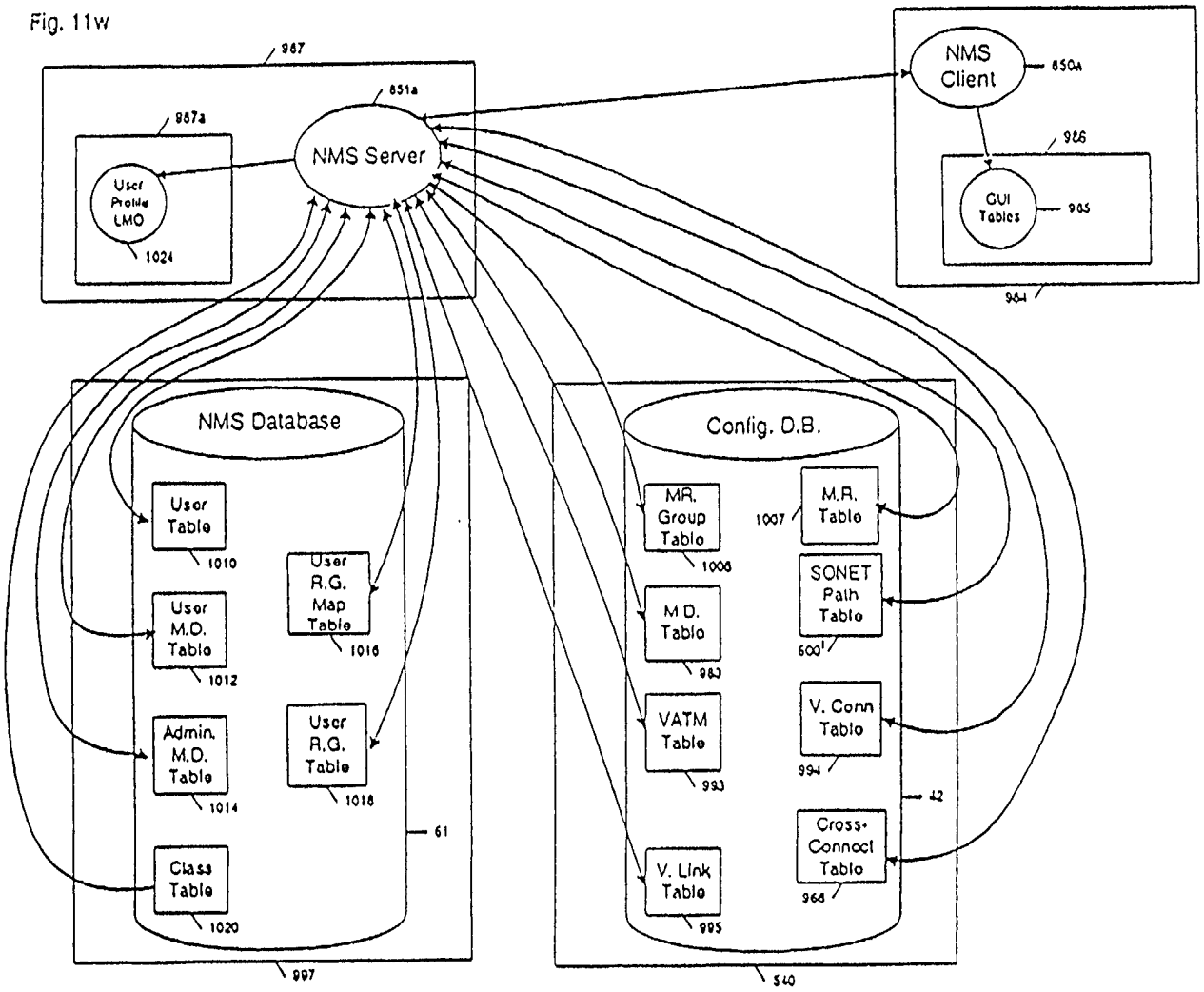
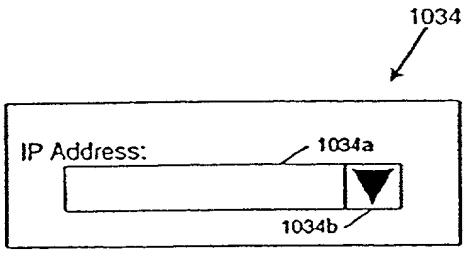
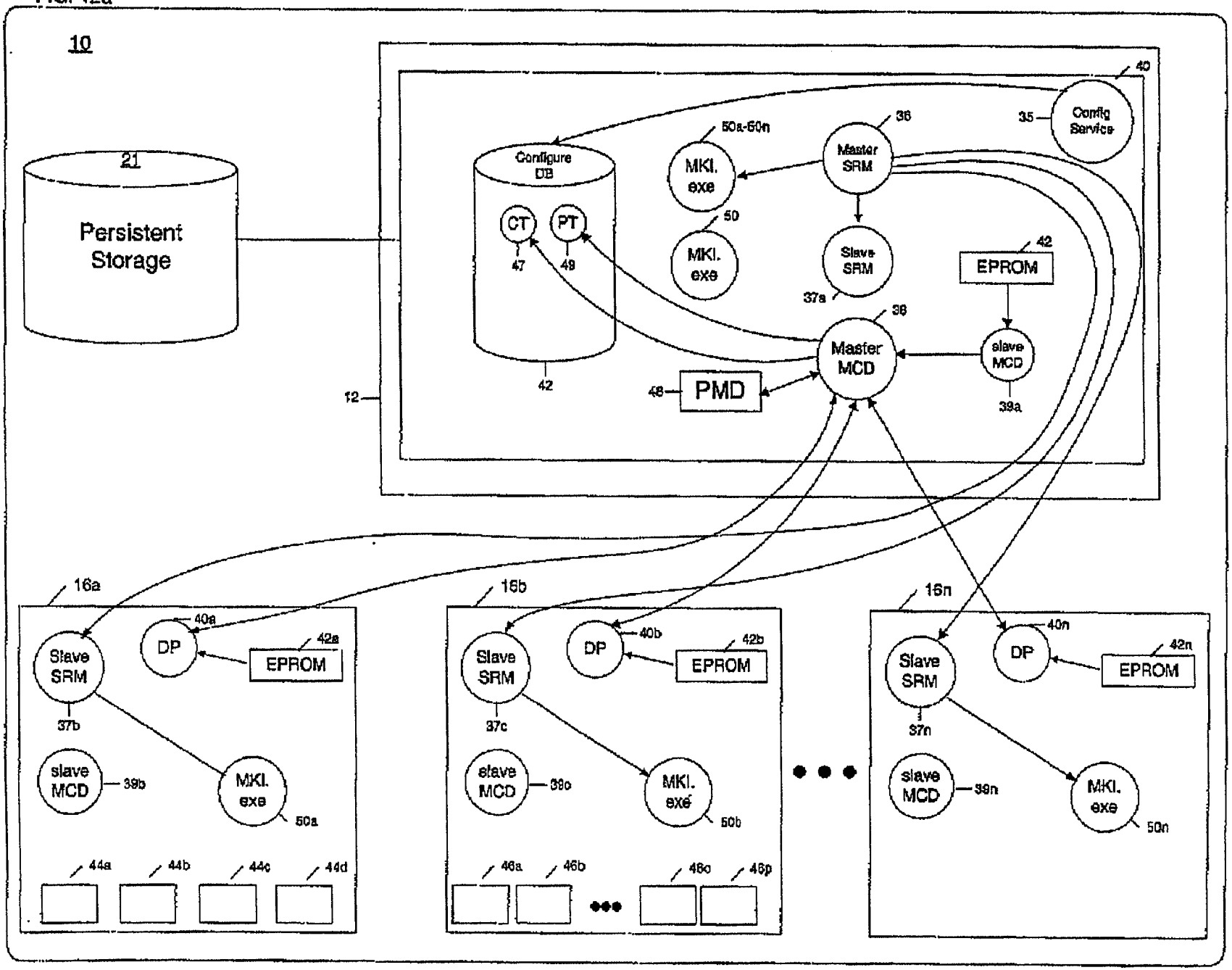

987
851a
987a
NMS Server
User Profile LMO
1024
NMS Client
850A
986
GUI Tables
905
964
NMS Database
User Table
1010
User M.O. Table
1012
Admin. M.D. Table
1014
Class Table
1020
User R.G. Map Table
1016
User R.G. Table
1018
61
997
Config. D.B.
MR. Group Table
1006
M D. Table
983
VATM Table
993
V. Link Table
995
1007
M.R. Table
SONET Path Table
600'
V. Conn Table
994
42
Cross-Connect Table
966
540

Fig. 11x



PAGE 02 EQUIPE LEGAL 04/09/2001 16:27 1978795214

FIG. 12a



CARD TABLE

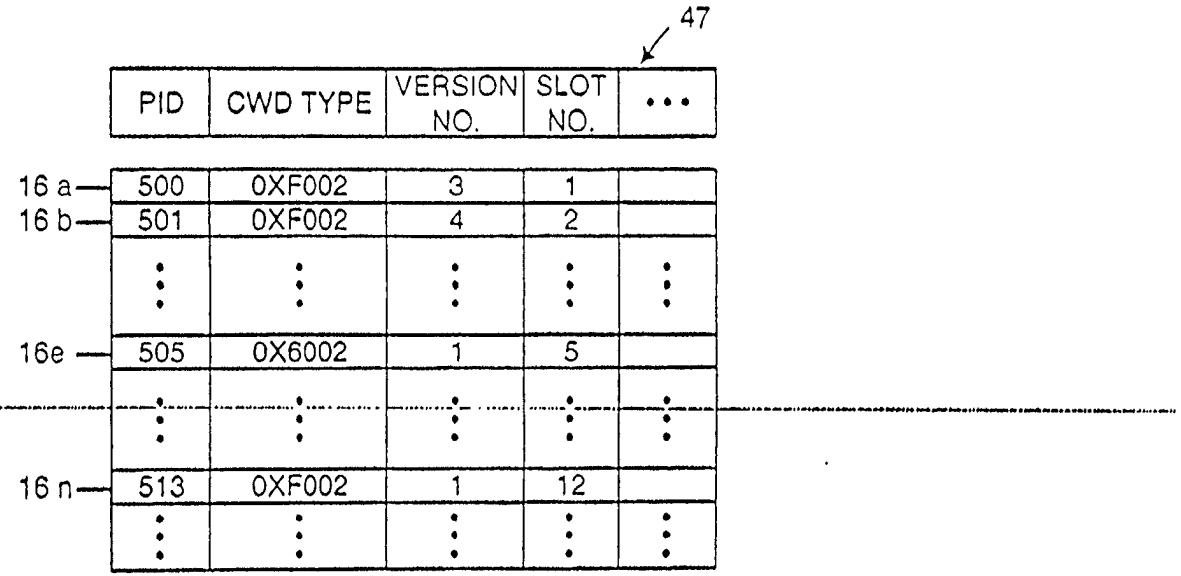


FIG. 12b

PORT TABLE

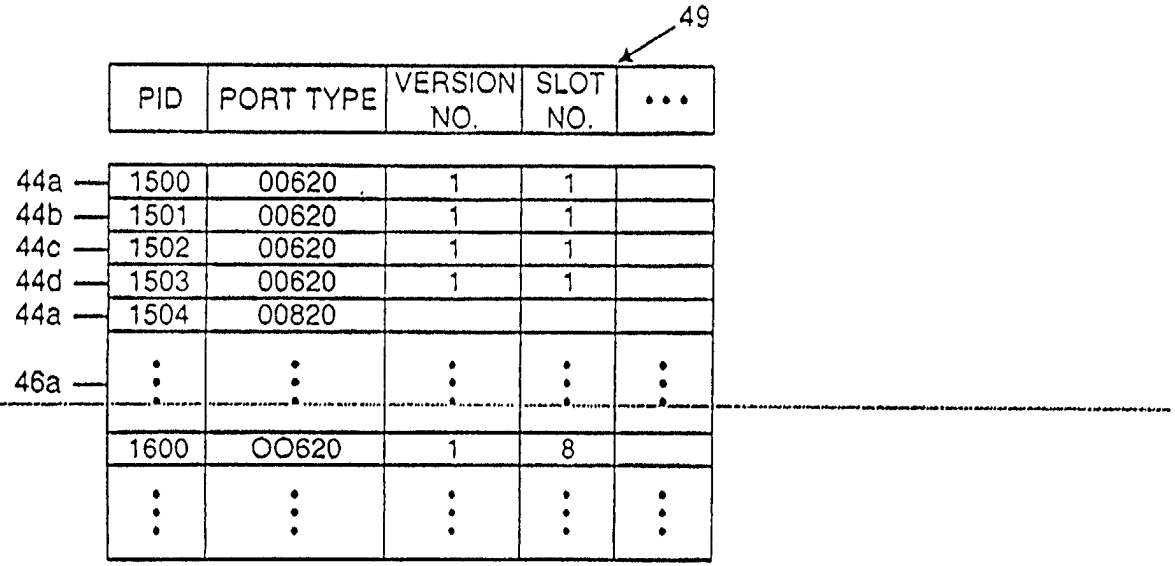
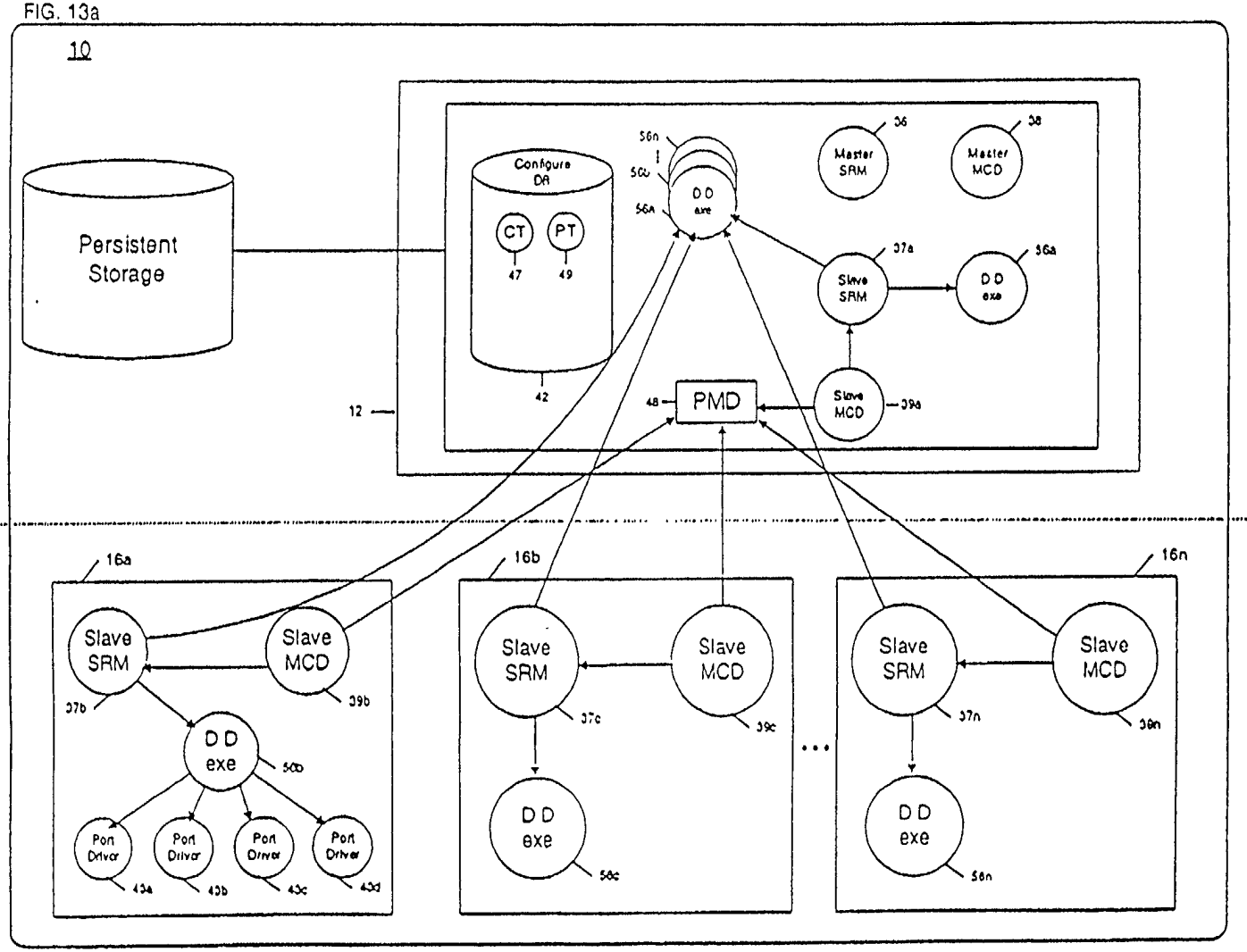


FIG. 12c

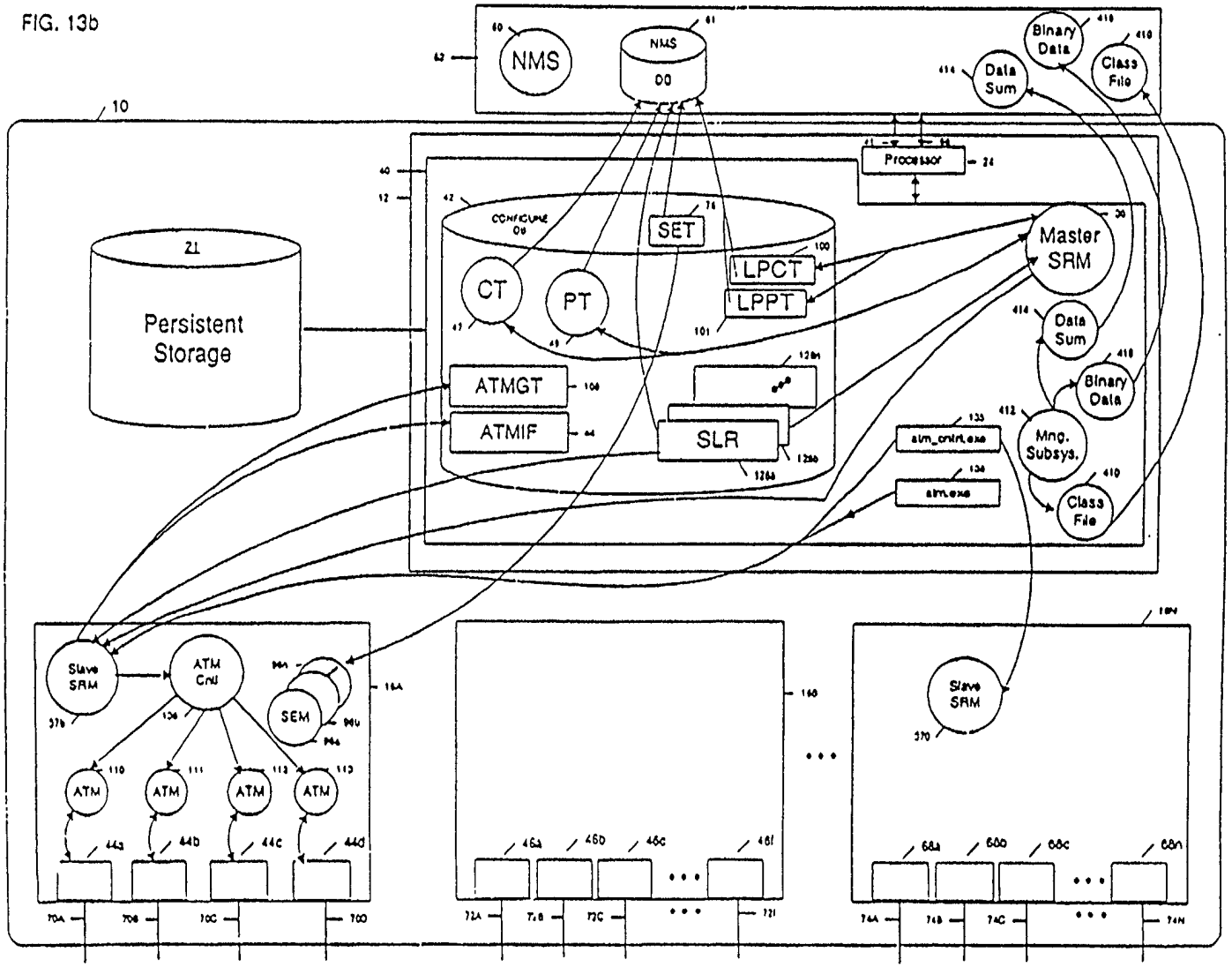
:ent By: Equipe Communications; 781 795 2031; Sep-1 ; 2:4 ; Page 17/21

FIG. 13a



DOCKET ALARM

FIG. 13b



DOCKET ORDER

Fig. 13c

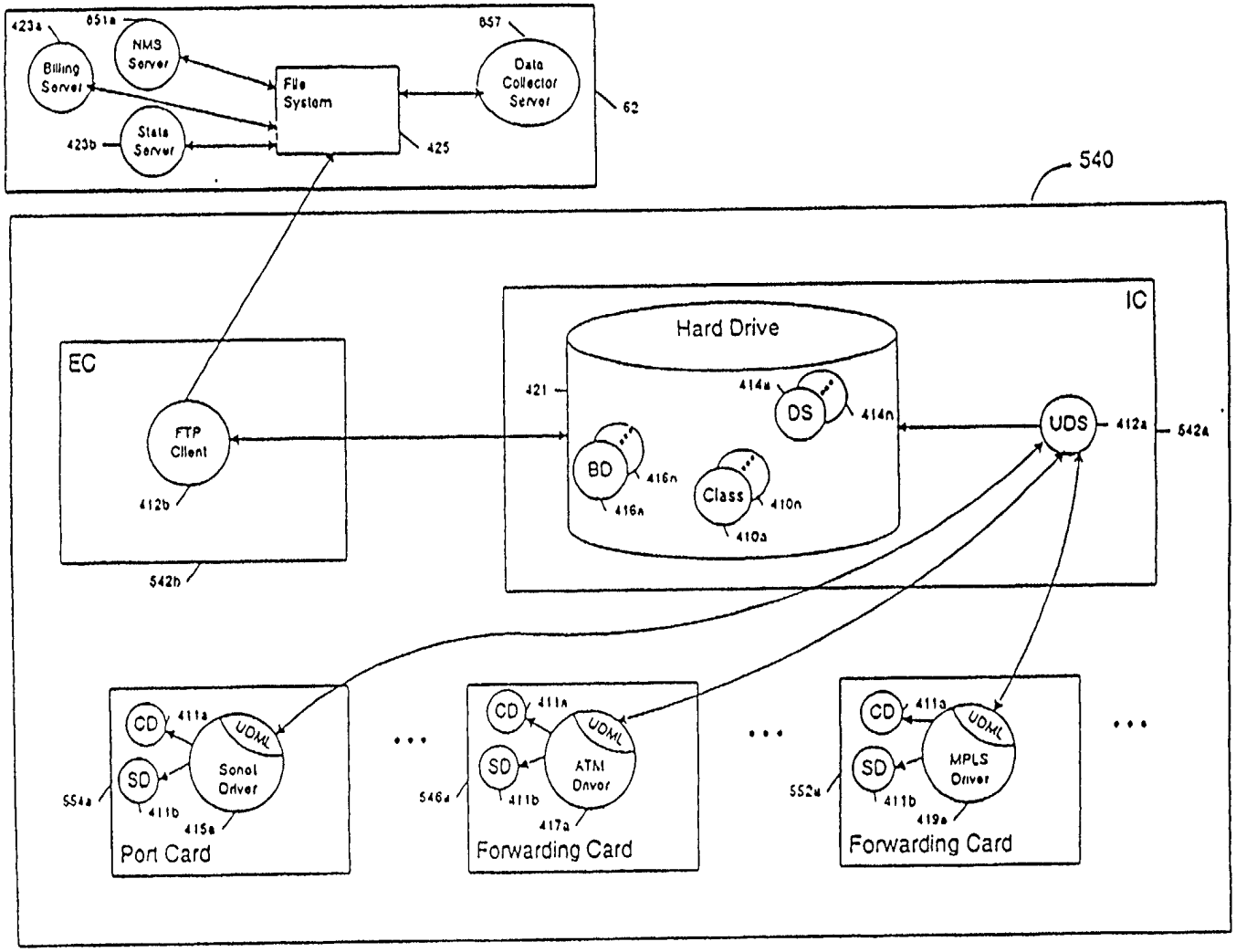


Fig. 13d

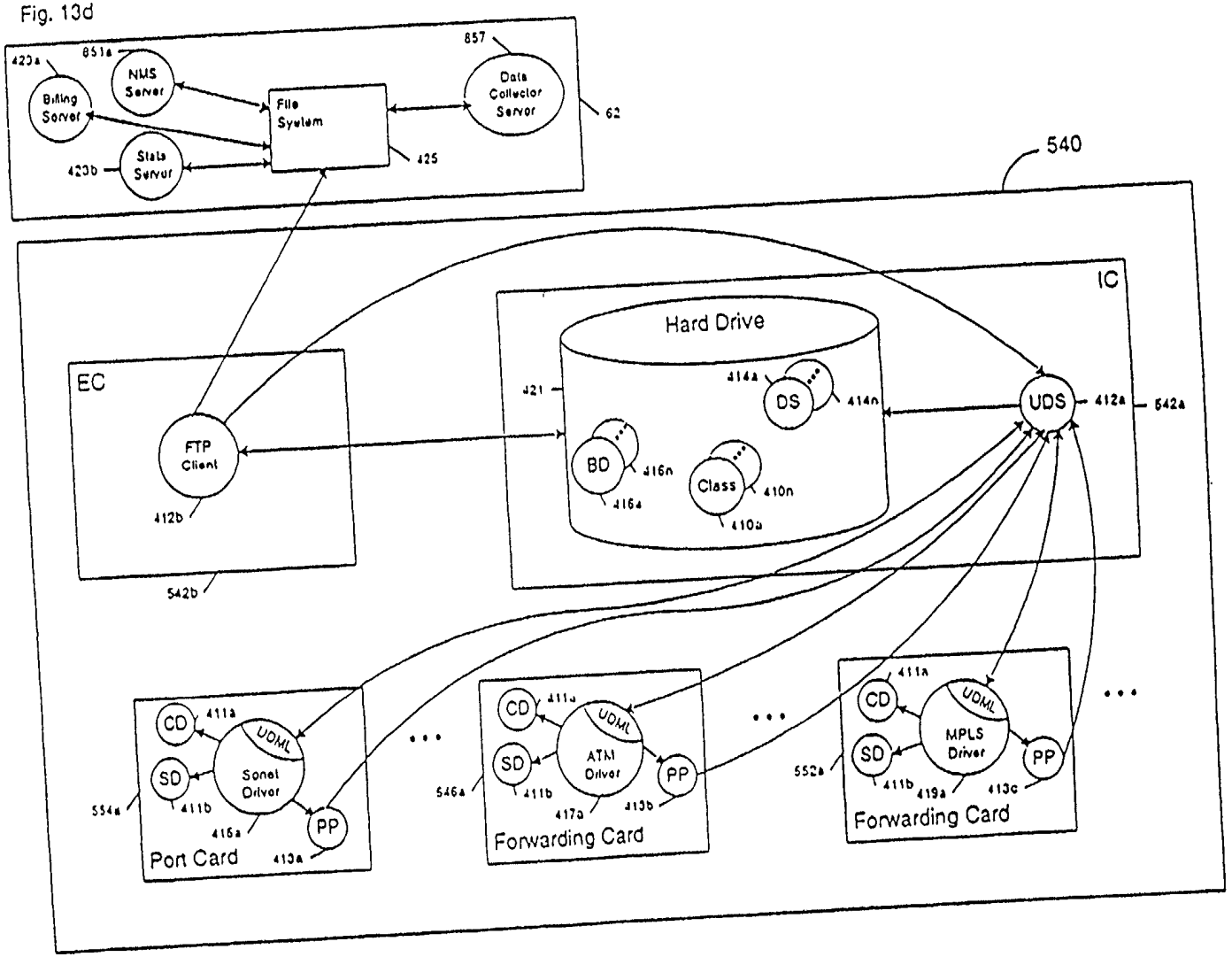

857
851a
423a
NMS Server
Billing Server
File System
Data Collector Server
62
425
423b
Stats Server
540
IC
Hard Drive
421
414a
DS
414n
UDS
412a
542a
EC
FTP Client
412b
542b
BD
416n
416a
Class
410n
410a
CD
411a
UDML
SD
411b
Sonet Driver
416a
PP
413a
Port Card
554a
ATM Driver
417a
413b
Forwarding Card
546a
MPLS Driver
419a
413c
552a

FIG. 14a

Service Endpoint Table 76

	Service Endpoint #	Port PID
78	1	1500
80	2	1501
82	3	1501
84	4	1501
86	5	1502
88	6	1502
90	7	1503
92	8	1503
94	9	1503
168	10	1502
	⋮	⋮

FIG. 14b

Logical to Physical Card Table 100

	98 LID	102 Primary PID	104 Back-up PID
106	30	500	513
109	31	501	513
	⋮	⋮	⋮

FIG. 14c

Logical to Physical Port Table 101

	98 LID	102 Primary PID	104 Back-up PID
107	40	1500	1600
	⋮	⋮	⋮

FIG. 14d

ATM Group Table 108

Group #	Card LID	...
1	30	
2	30	
3	30	
4	30	

FIG. 14e

ATM Interface Table 114

ATM IF	ATM Group	SE	...
1	1	1	
2	1	1	
3	1	1	
4	2	2	
5	2	3	
6	2	4	
⋮	⋮	⋮	⋮
12	3	10	
⋮	⋮	⋮	⋮

170

FIG. 14f

Software Load Record 128a

130	Control Shim	LID — 132
134	atm-cntl.exe	30

T0670 "DTE8660

FIG. 15

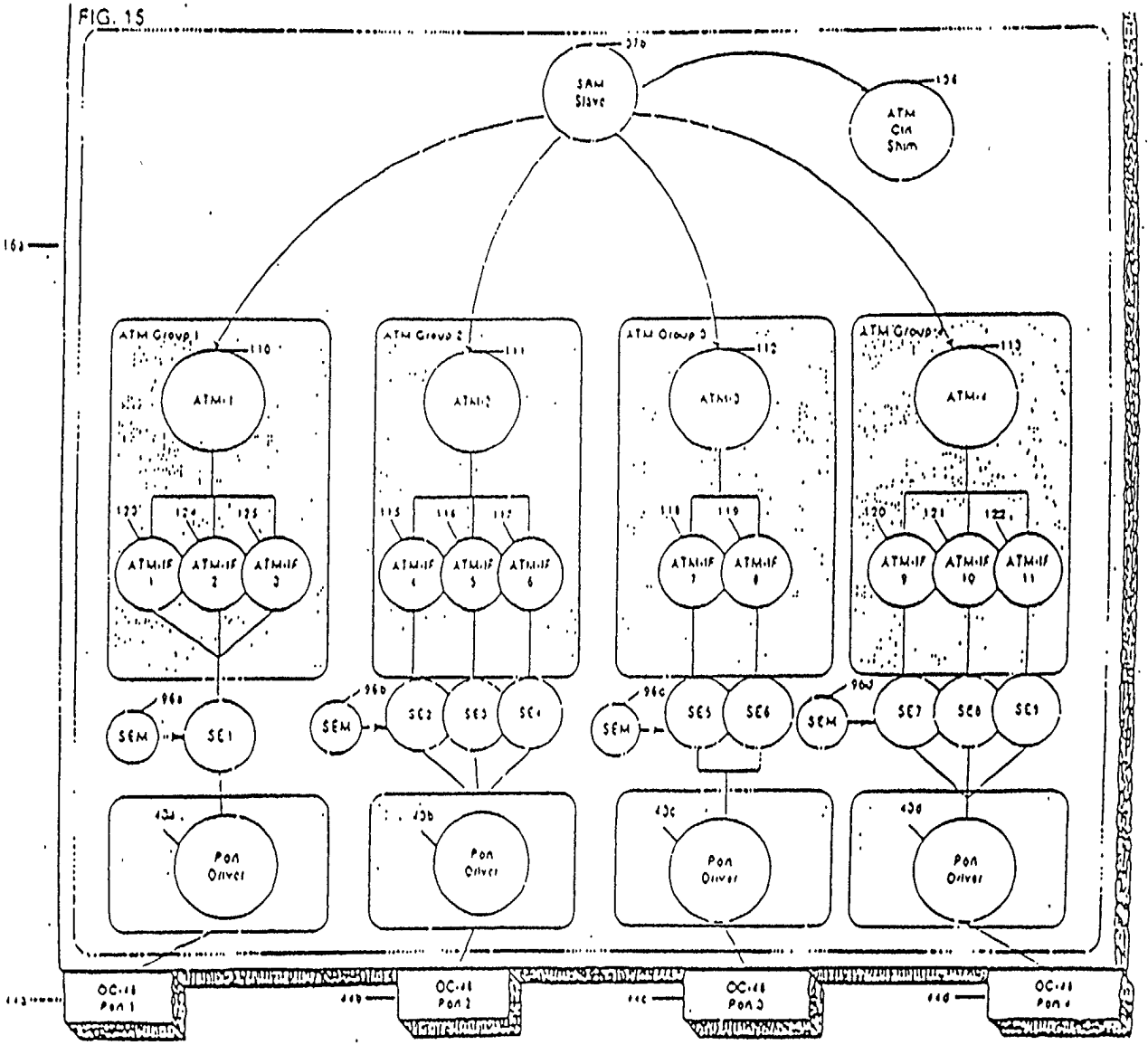


FIG. 16a

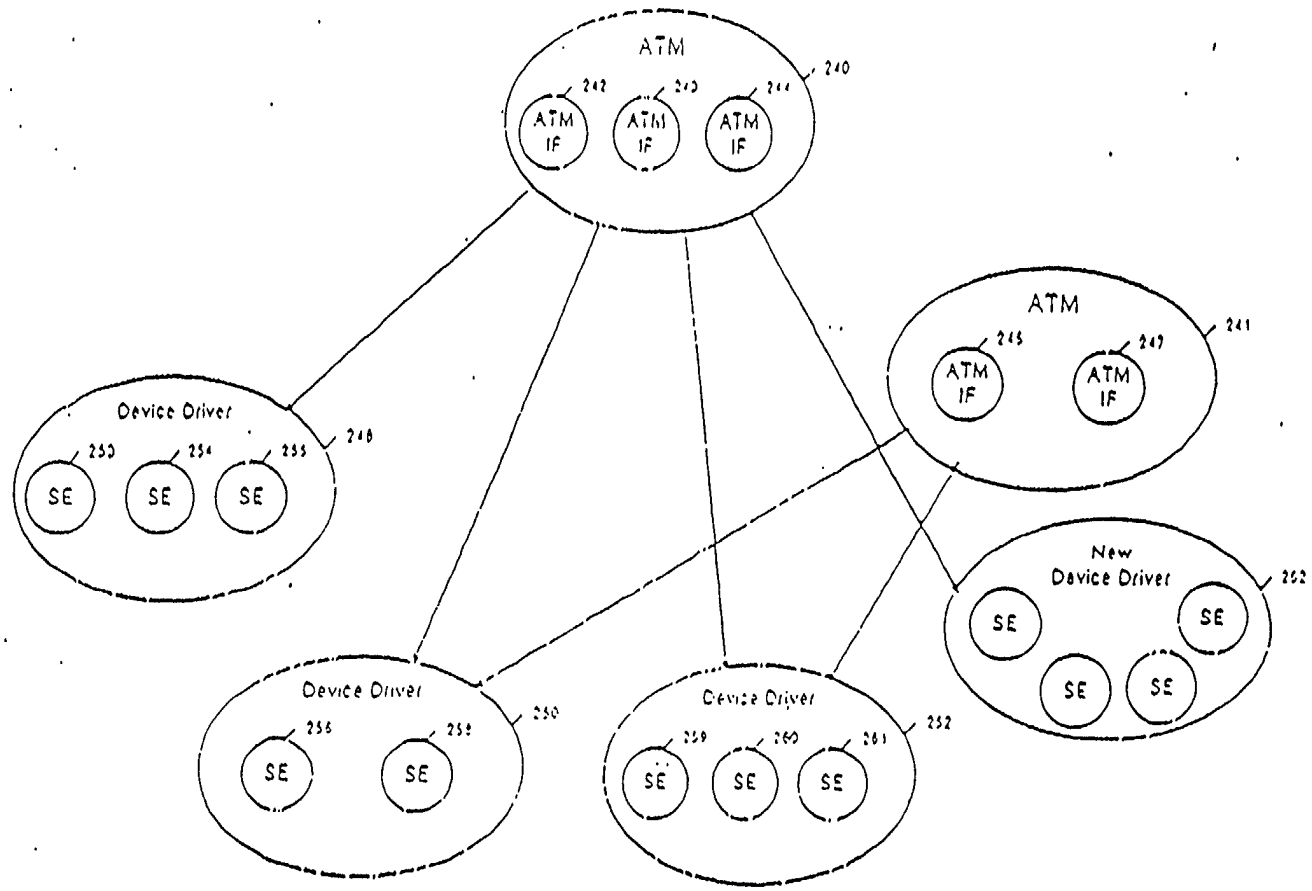
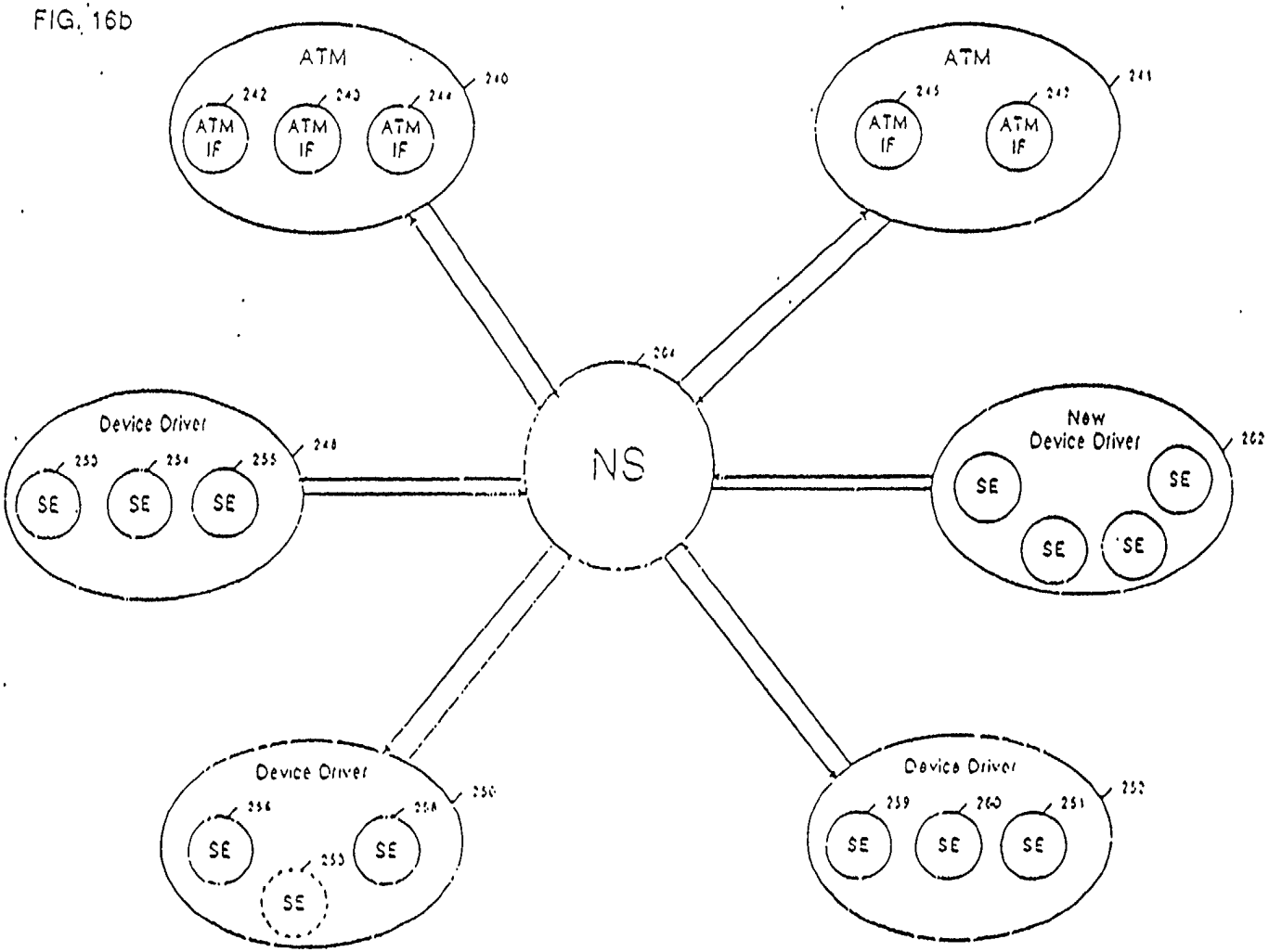
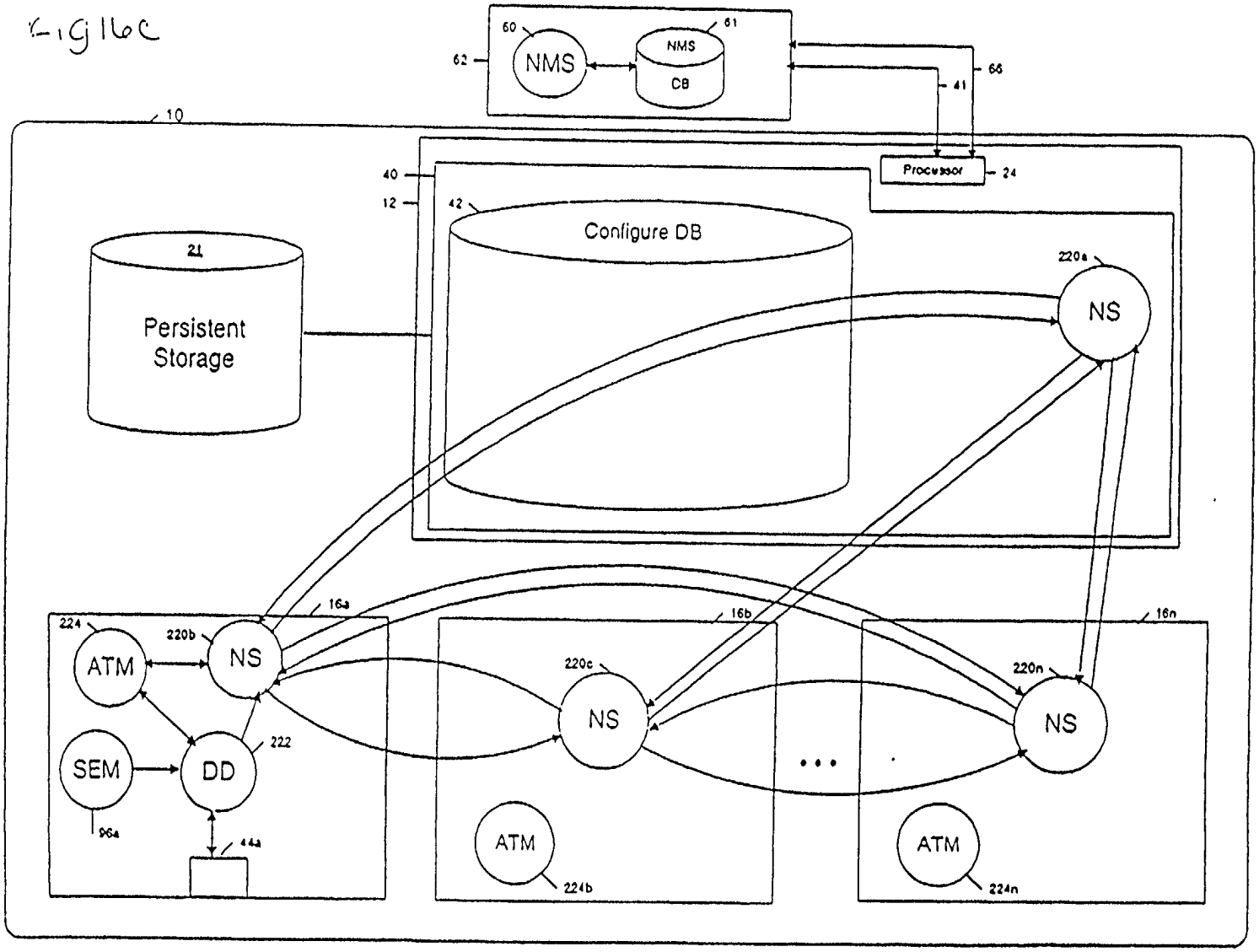

ATM
240
242
243
244
ATM IF
ATM IF
ATM IF
ATM
241
245
247
ATM IF
ATM IF
Device Driver
248
253
254
255
SE
SE
SE
New Device Driver
252
SE
SE
SE
SE
Device Driver
250
256
259
SE
SE
Device Driver
252
259
260
261
SE
SE
SE

FIG. 16b

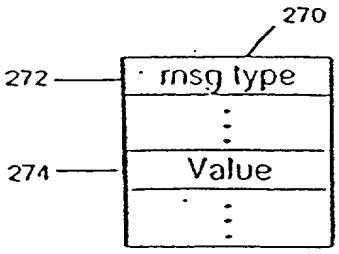

ATM
240
242
243
244
ATM IF
ATM IF
ATM IF
ATM
241
245
246
ATM IF
ATM IF
NS
Device Driver
248
253
254
255
SE
SE
SE
New Device Driver
262
SE
SE
SE
SE
Device Driver
250
256
258
253
SE
SE
SE
Device Driver
252
259
260
261
SE
SE
SE

TOSTHO" OTEBEBEO

Fig 16c



G. 16D



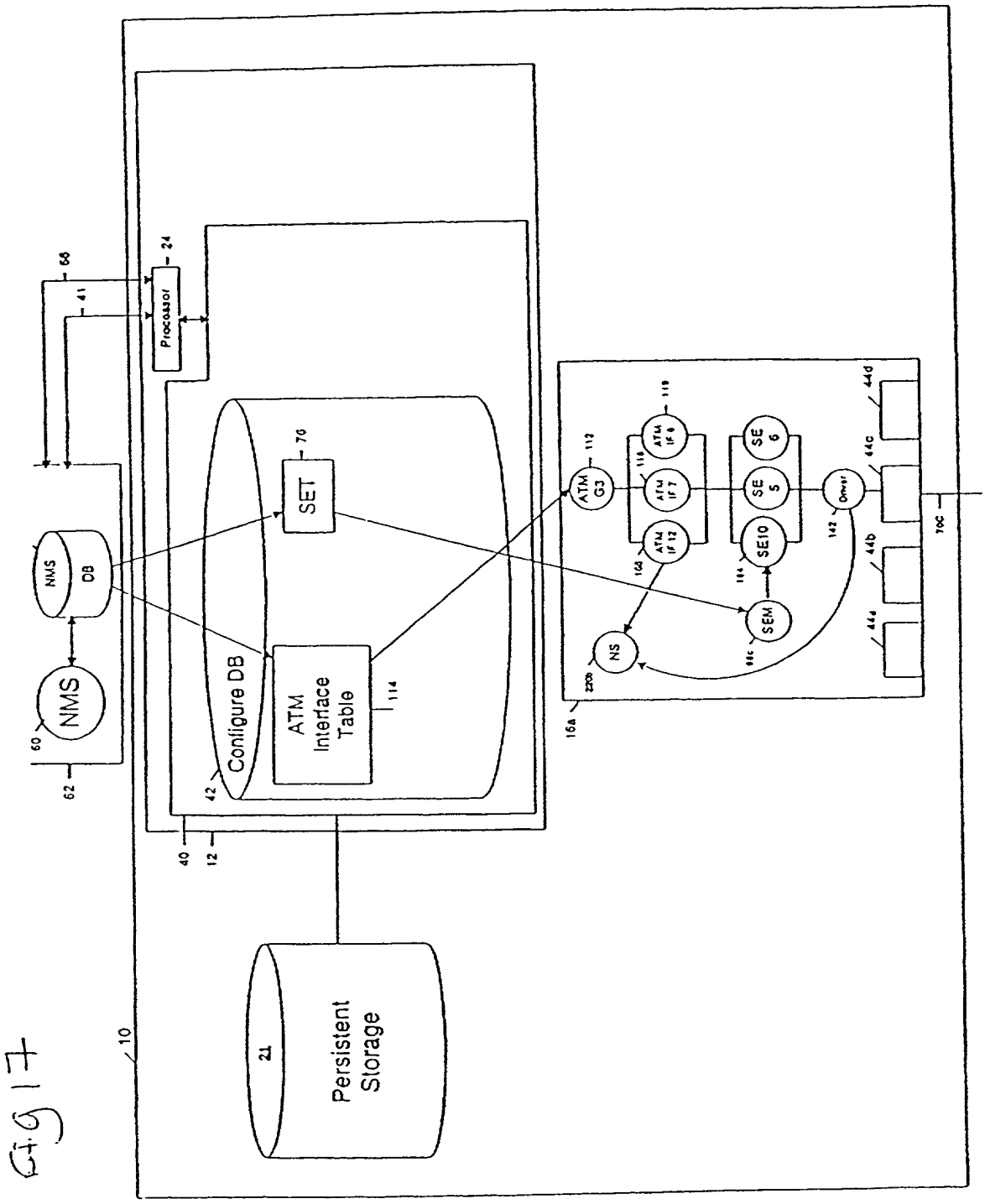
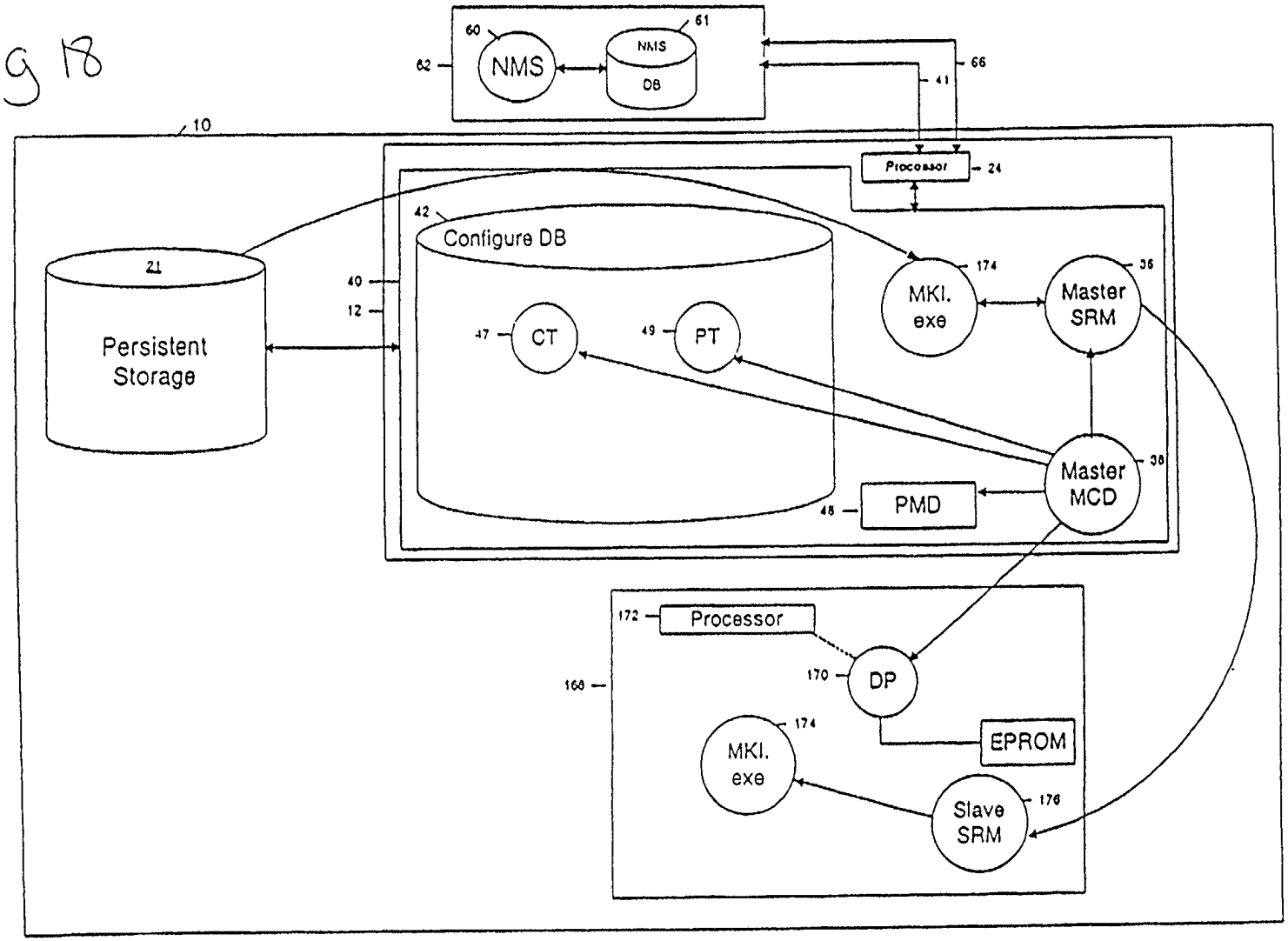

10
21
Persistent Storage
40
12
42
Configure DB
70
SET
114
ATM Interface Table
60
NMS
62
DB
68
41
24
Processor
16A
112
ATM G3
118
ATM IF 8
ATM IF 7
ATM IF 12
116
SE 6
SE 5
SE10
114
SEM
116
NS
200
142
Dmxr
44d
44c
44b
44a
16C

Fig 17

Fig 18


60
NMS
61
NMS
DB
62
66
41
10
Processor
24
42
Configure DB
21
Persistent
Storage
40
12
47
CT
49
PT
MKI.
exe
174
Master
SRM
36
Master
MCD
38
PMD
48
172
Processor
170
DP
168
EPROM
MKI.
exe
174
Slave
SRM
176

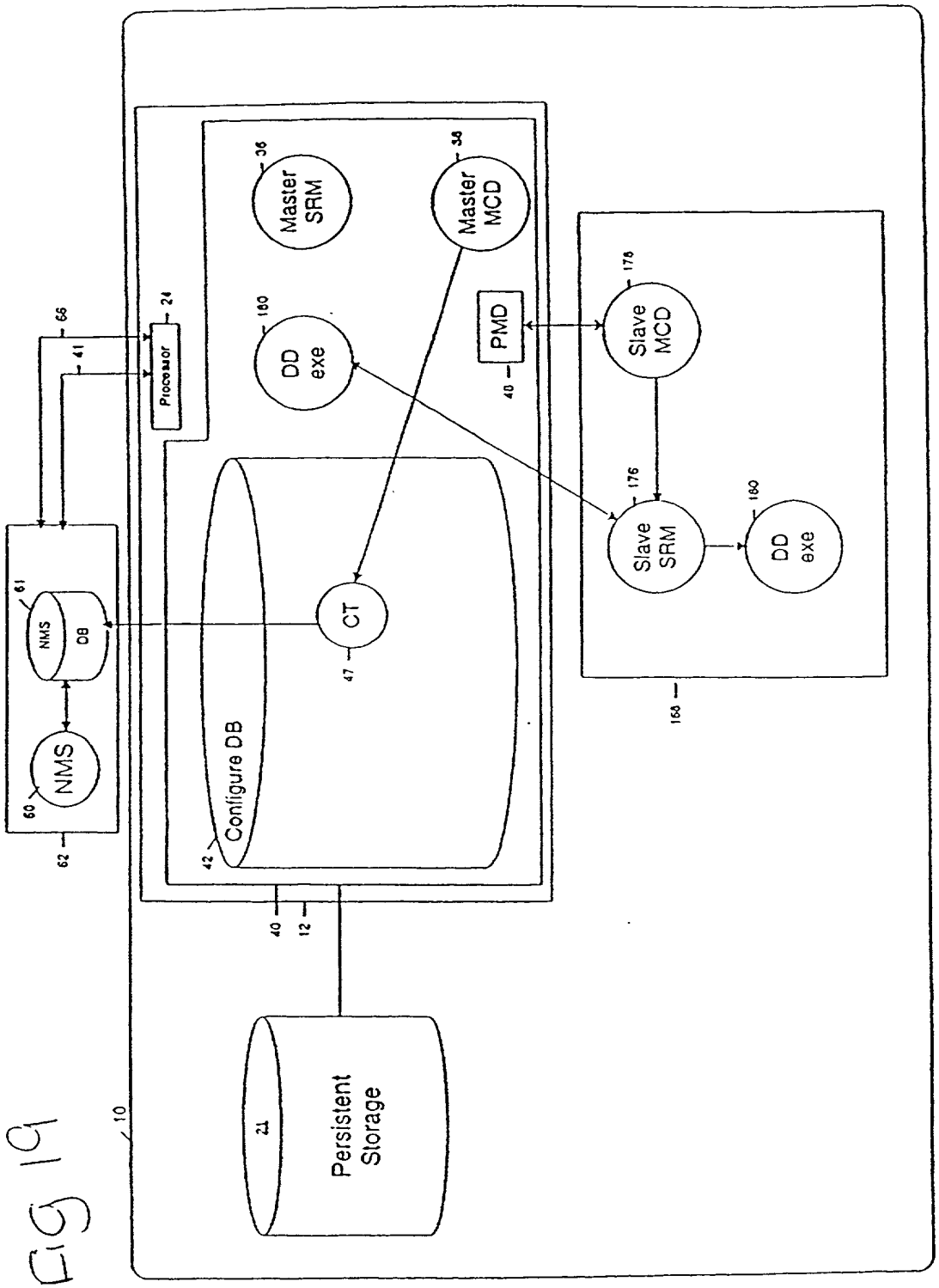
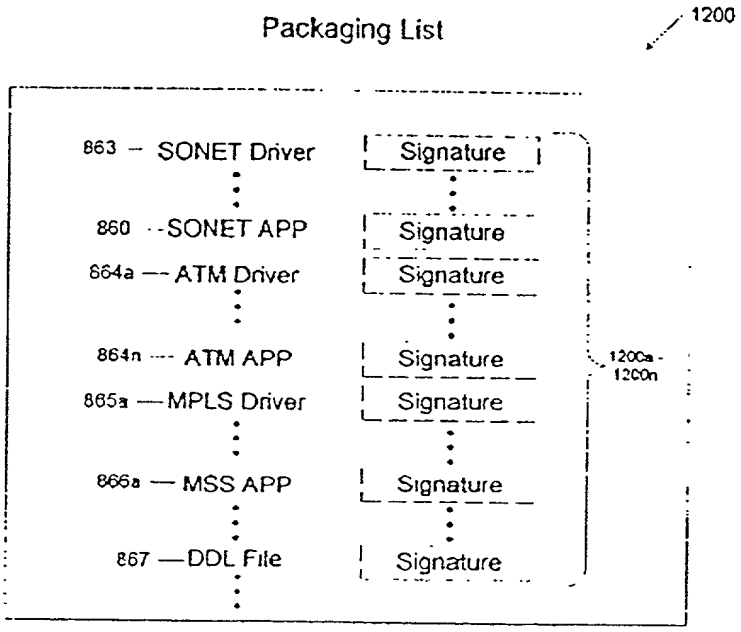

Master SRM
36
Master MCD
38
DD exe
180
PMD
40
Processor
24
55
41
Slave MCD
178
Slave SRM
176
DD exe
180
NMS
DB
61
NMS
60
62
CT
47
Configure DB
42
40
12
Persistent Storage
21
10
164

FIG 1C

Fig. 20a


Packaging List
1200
863 — SONET Driver
860 — SONET APP
864a — ATM Driver
864n — ATM APP
865a — MPLS Driver
866a — MSS APP
867 — DDL File
Signature
Signature
Signature
Signature
Signature
Signature
Signature
1200a - 1200n

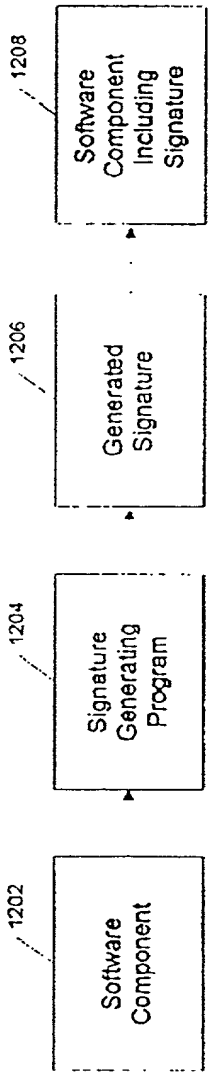
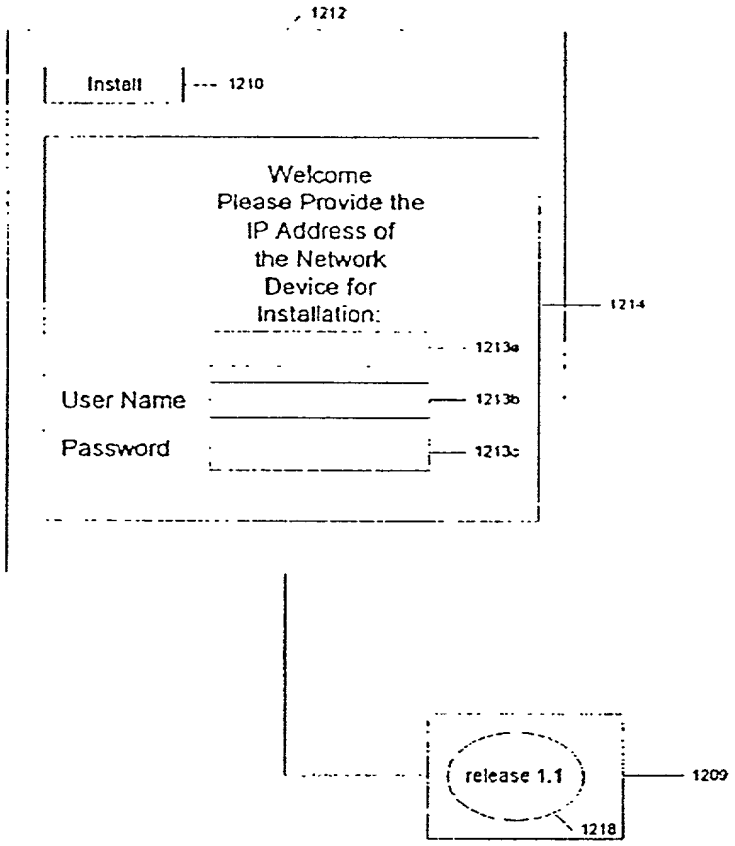

1202
Software Component
1204
Signature Generating Program
1206
Generated Signature
1208
Software Component Including Signature

Fig. 20b

Fig. 20c


1212
Install
1210
Welcome
Please Provide the
IP Address of
the Network
Device for
Installation:
1214
1213a
User Name
1213b
Password
1213c
release 1.1
1209
1218

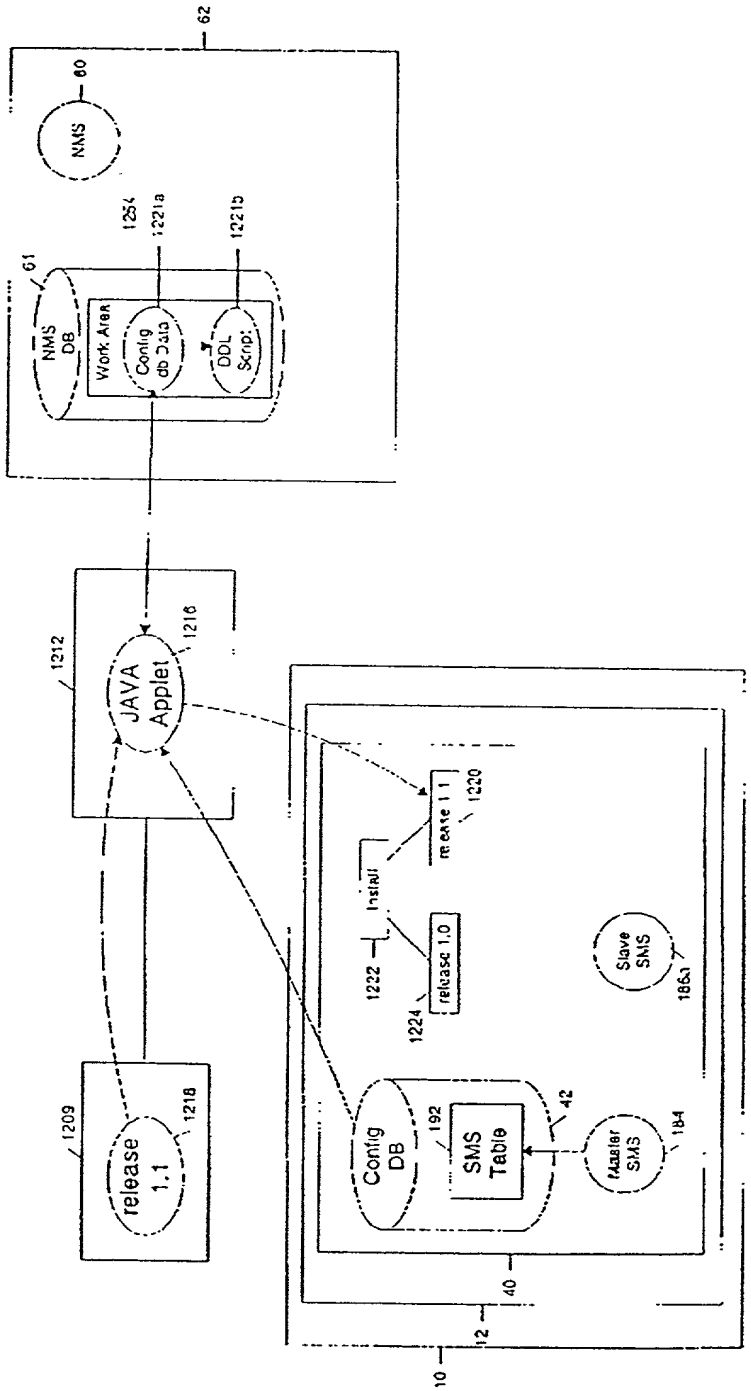
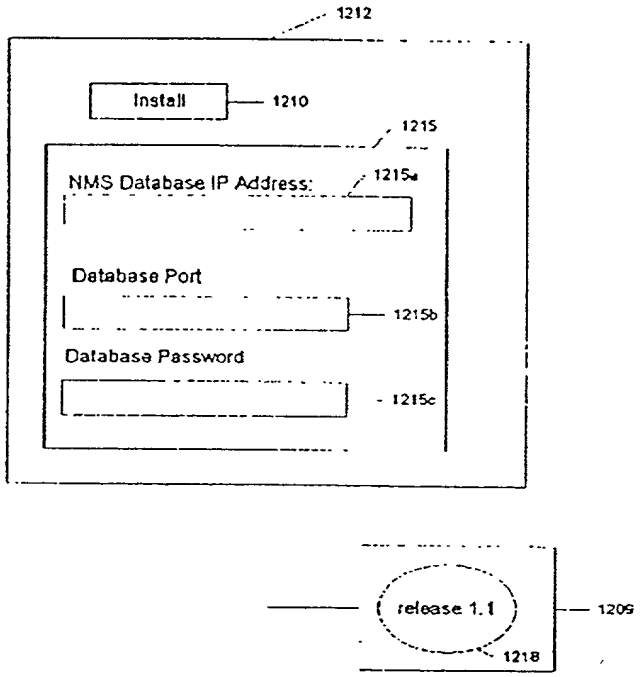

62
NMS
60
1224
1221a
1221b
61
NMS DB
Work Area
Config db Data
DDL Script
1212
JAVA Applet
1216
1220
release 1.1
Install
1222
release 1.0
1224
Slave SMS
186
1209
release 1.1
1218
Config DB
192
SMS Table
42
Master SMS
184
40
12
10

Fig. 20d

Fig. 20e


1212
Install
1210
1215
NMS Database IP Address:
1215a
Database Port
1215b
Database Password
1215c
release 1.1
1209
1218

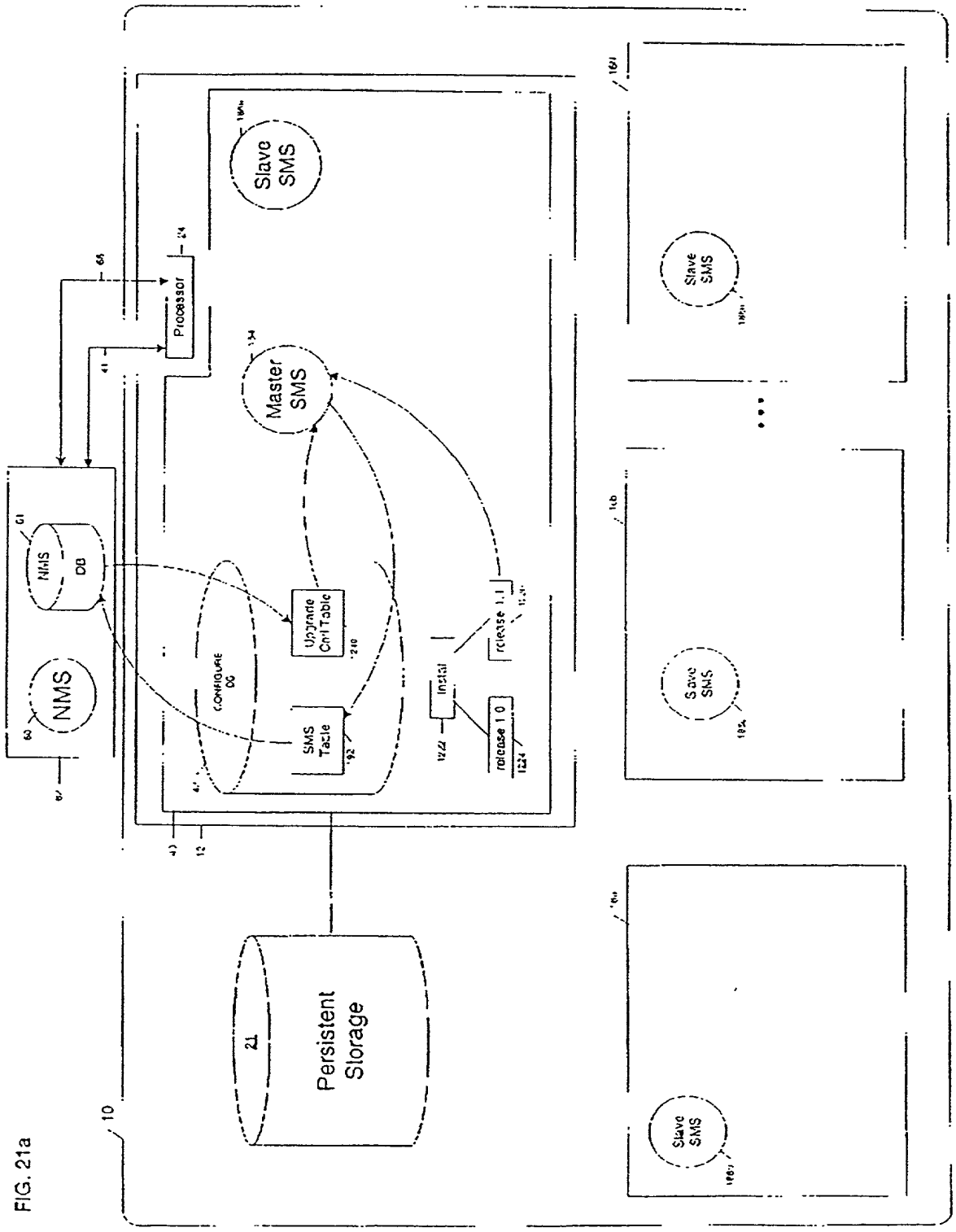

Slave SMS
Master SMS
Processor
NMS
DB
NMS
Upgrade Ctrl Table
SMS Table
CONFIGURE DB
release 1.1
release 1.0
Persistent Storage
Slave SMS
Slave SMS
Slave SMS
Slave SMS

FIG. 21a

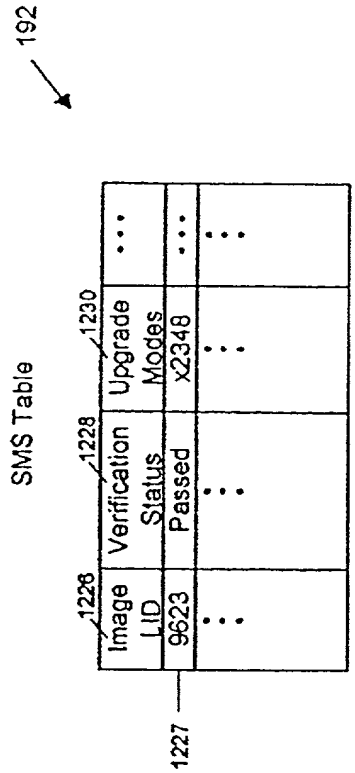

192
SMS Table
1226
Image LID
1228
Verification Status
1230
Upgrade Modes
9623
Passed
x2348
1227

Fig. 21b

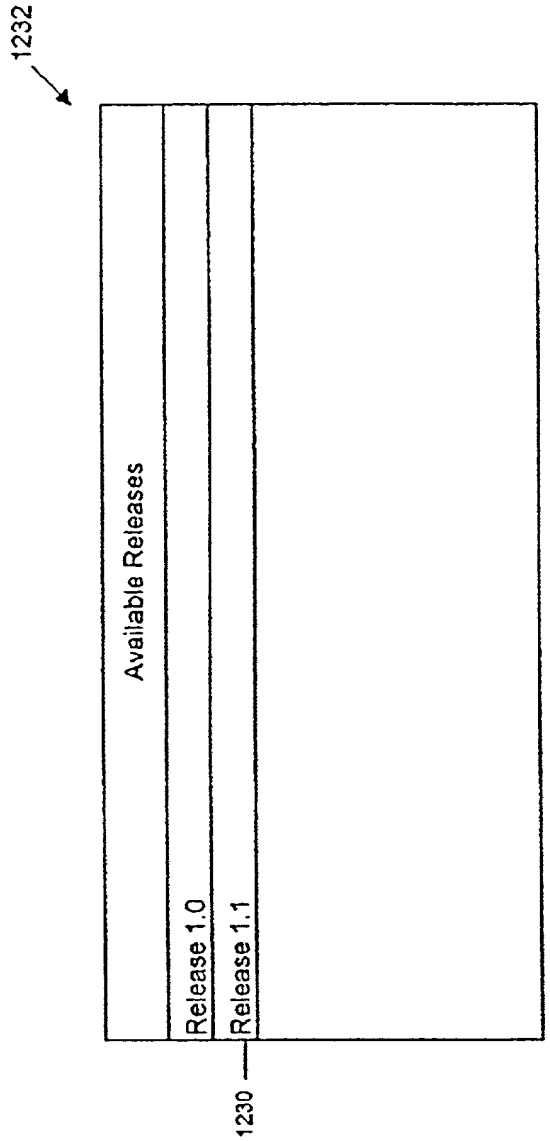


Fig. 21c

Faxed = 01-Feb-01

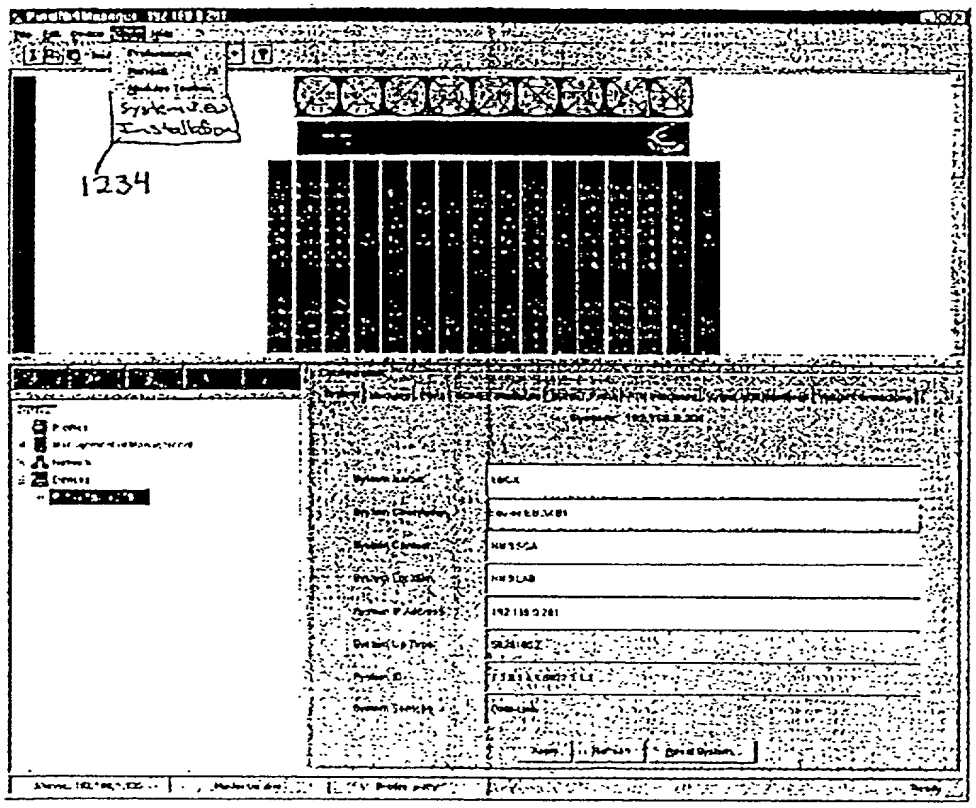


Fig. 21d

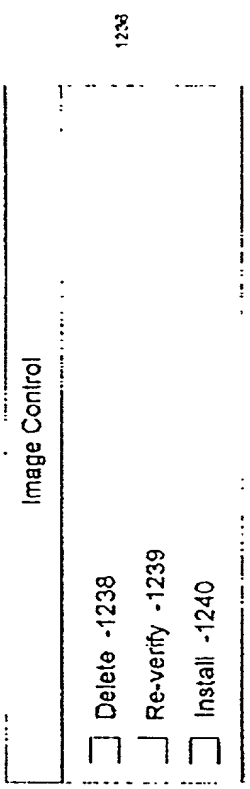


Fig. 21e

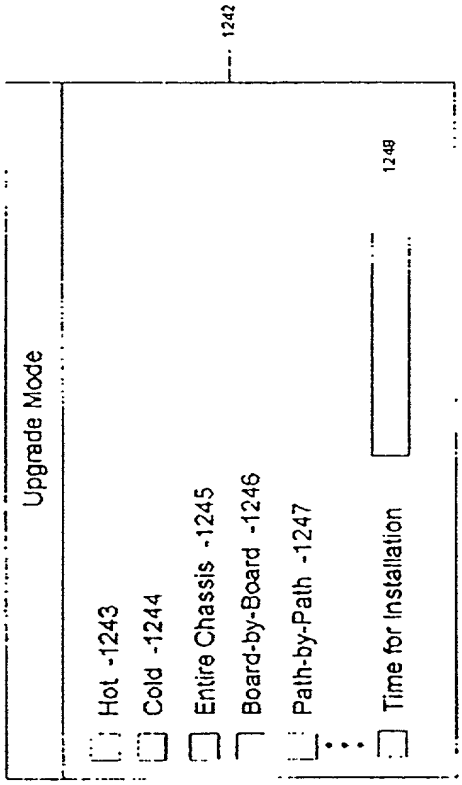


Fig. 21f

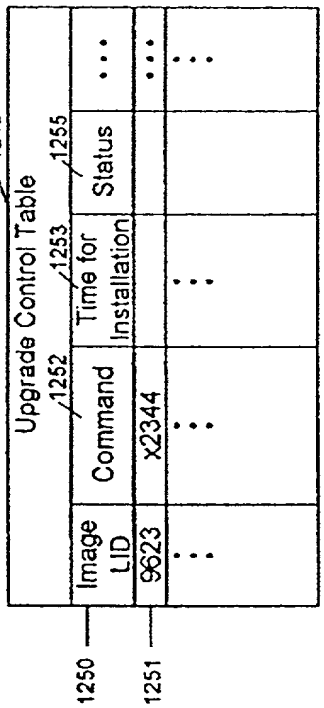

1248
Upgrade Control Table
Image LID
1252
Command
1253
Time for Installation
1255
Status
9623
X2344
1250
1251

Fig. 21g

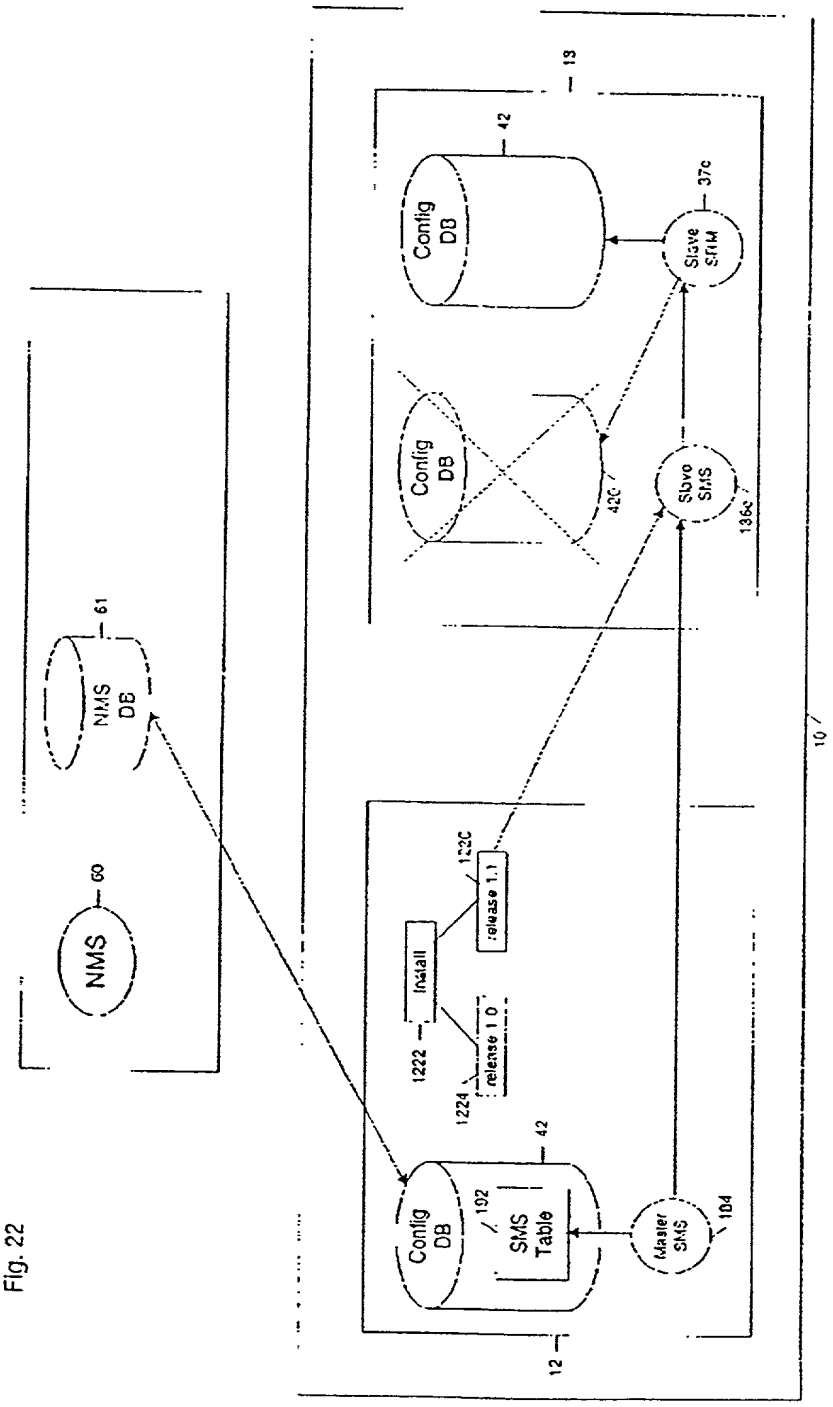

NMS
60
NMS DB
61
Config DB
42
SMS Table
102
Master SMS
104
Slave SMS
136c
Slave SMS
37c
Config DB
42c
Config DB
42
Install
1222
release 1.0
1224
release 1.1
122c
12
10
13

Fig. 22

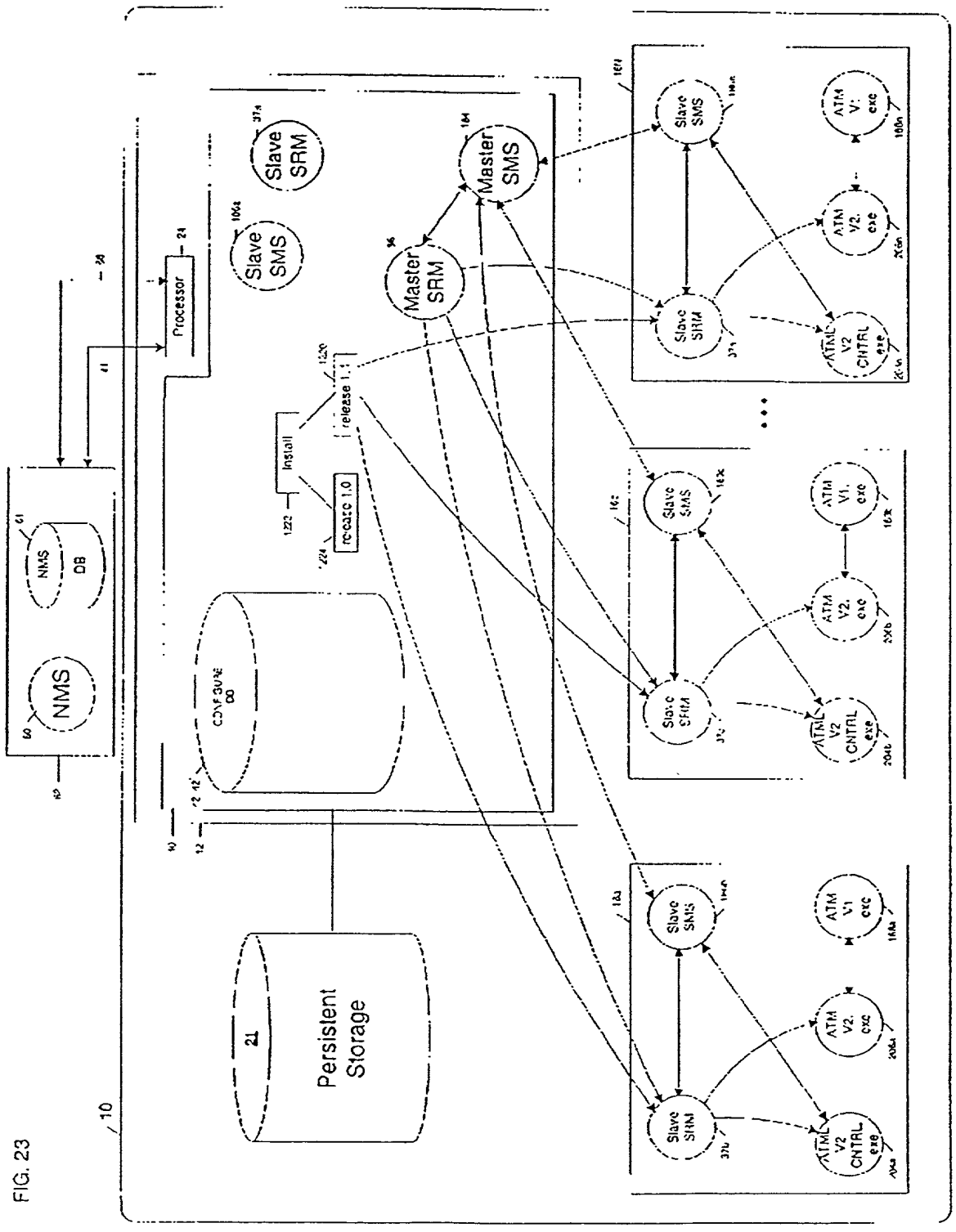

Persistent Storage
21
NMS
DB
Processor
Slave SMS
Slave SRM
Master SMS
Master SRM
Install
release 1.0
release 1.1
ATM V2 CNTRL
ATM V2.
ATM V1.
10

FIG. 23

FIG. 24

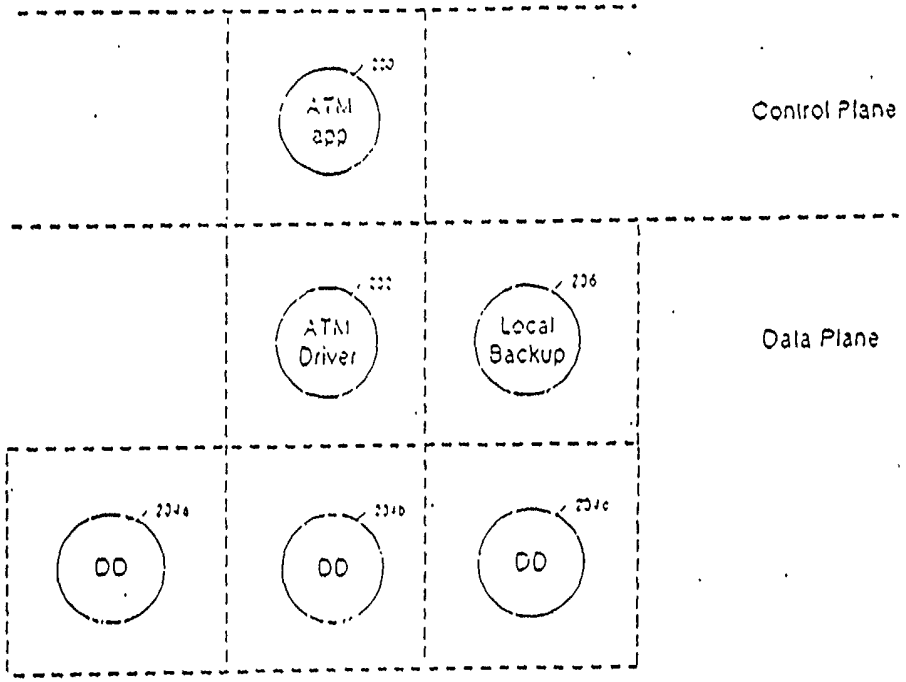
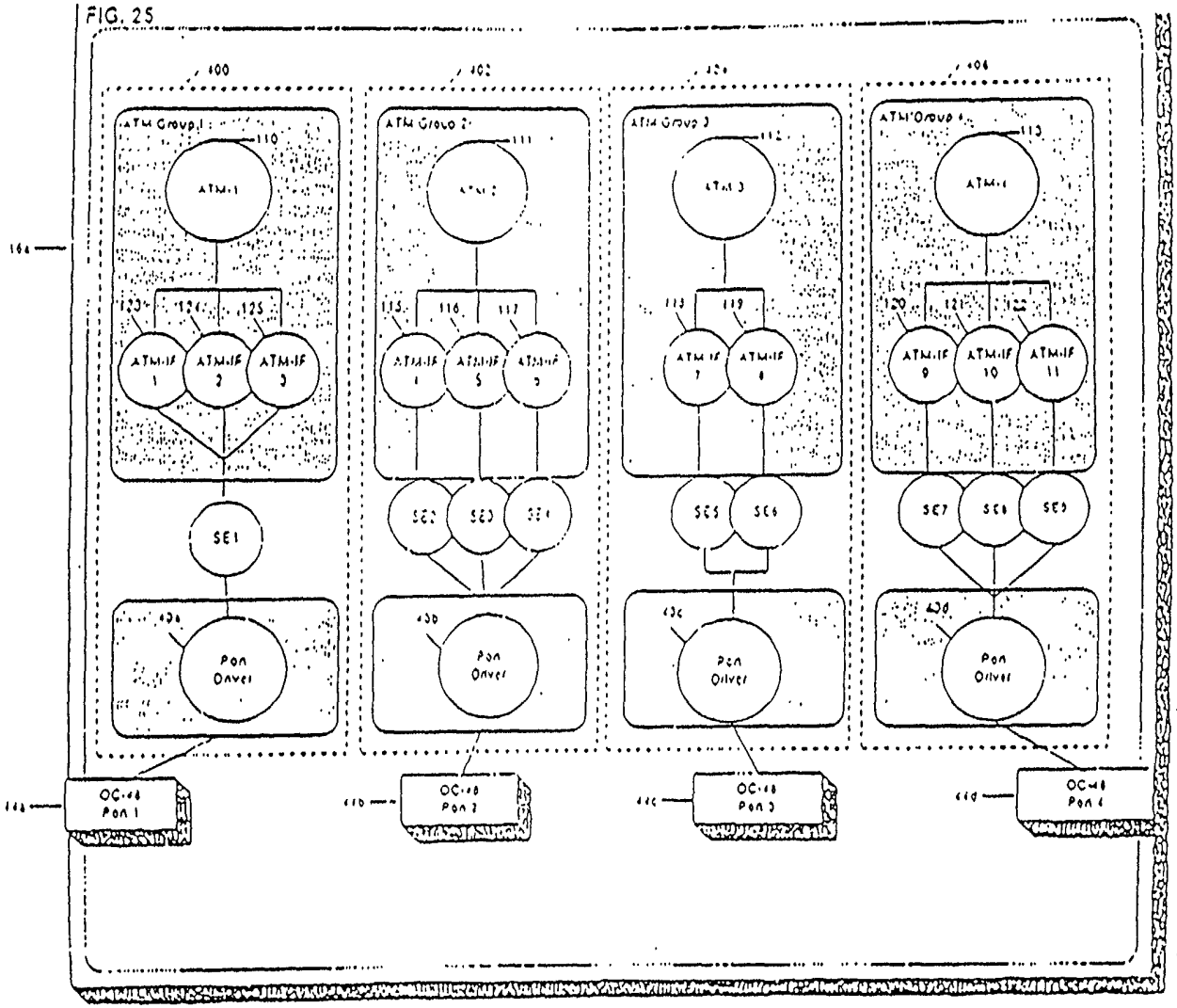

ATM app
Control Plane
ATM Driver
Local Backup
Data Plane
DD
DD
DD

FIG. 25


ATM Group 1
ATM Group 2
ATM Group 3
ATM Group 4
ATM-1
ATM-2
ATM-3
ATM-4
ATM-IF 1
ATM-IF 2
ATM-IF 3
ATM-IF 4
ATM-IF 5
ATM-IF 6
ATM-IF 7
ATM-IF 8
ATM-IF 9
ATM-IF 10
ATM-IF 11
SE1
SE2
SE3
SE4
SE5
SE6
SE7
SE8
SE9
PON Driver
PON Driver
PON Driver
PON Driver
OC-48 PON 1
OC-48 PON 2
OC-48 PON 3
OC-48 PON 4

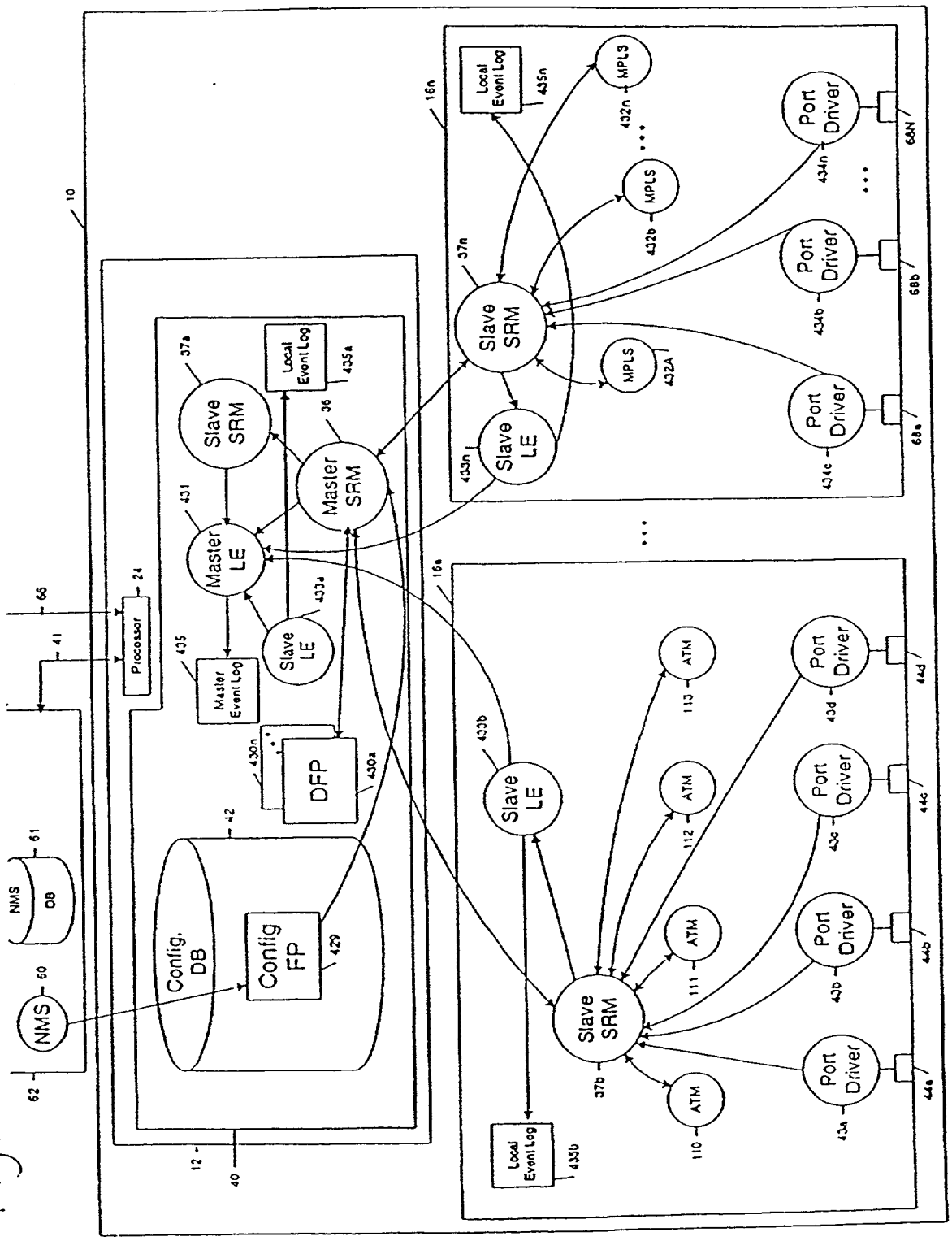

10
NMS
60
DB
61
62
Config. DB
Config FP
429
42
DFP
430a
430n
Processor
24
66
41
Master Event Log
435
Master LE
431
Slave LE
433a
Slave SRM
37a
Local Event Log
435a
Master SRM
36
12
40
16a
Slave LE
433b
Slave SRM
37b
Local Event Log
435b
ATM
110
ATM
111
ATM
112
ATM
113
Port Driver
43a
Port Driver
43b
Port Driver
43c
Port Driver
43d
44a
44b
44c
44d
16n
Slave LE
433n
Slave SRM
37n
Local Event Log
435n
MPLS
432A
MPLS
432b
MPLS
432n
Port Driver
434c
Port Driver
434b
Port Driver
434n
68a
68b
68N

Fig 2b

FIG. 27

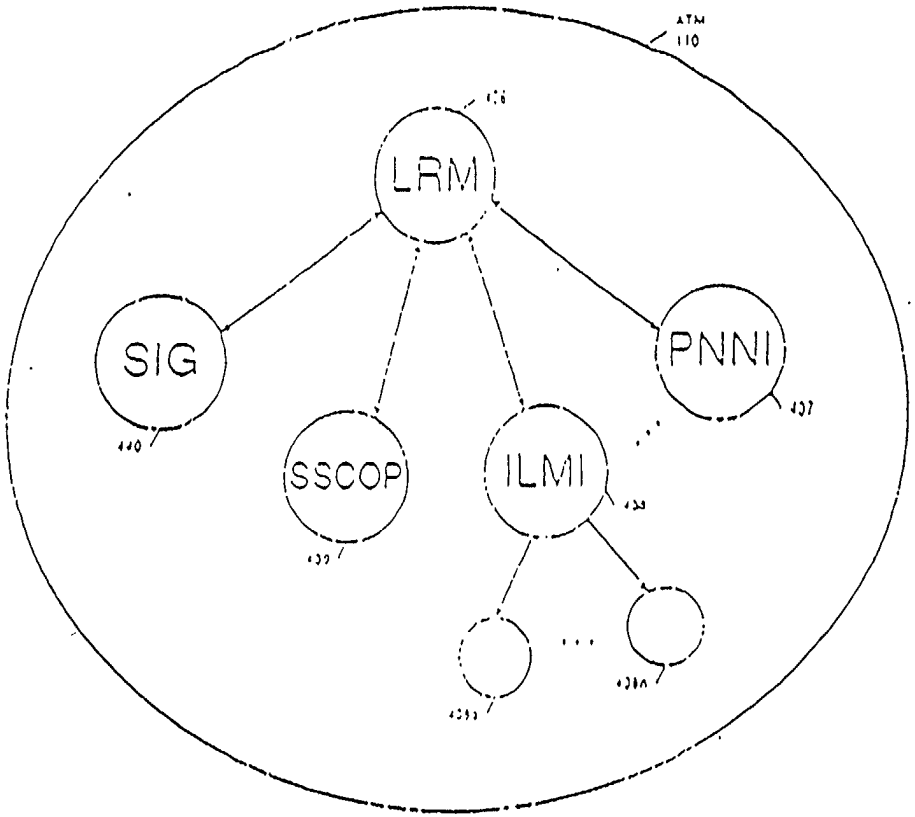


FIG. 28

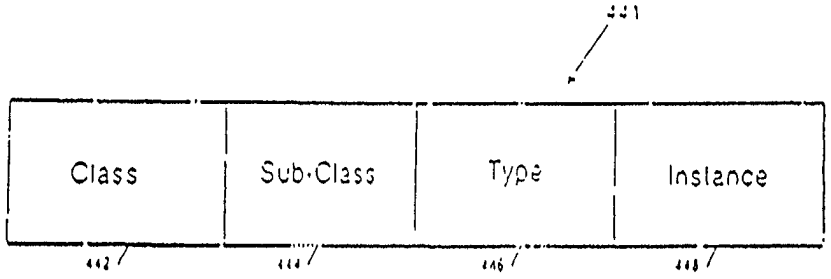


FIG. 29

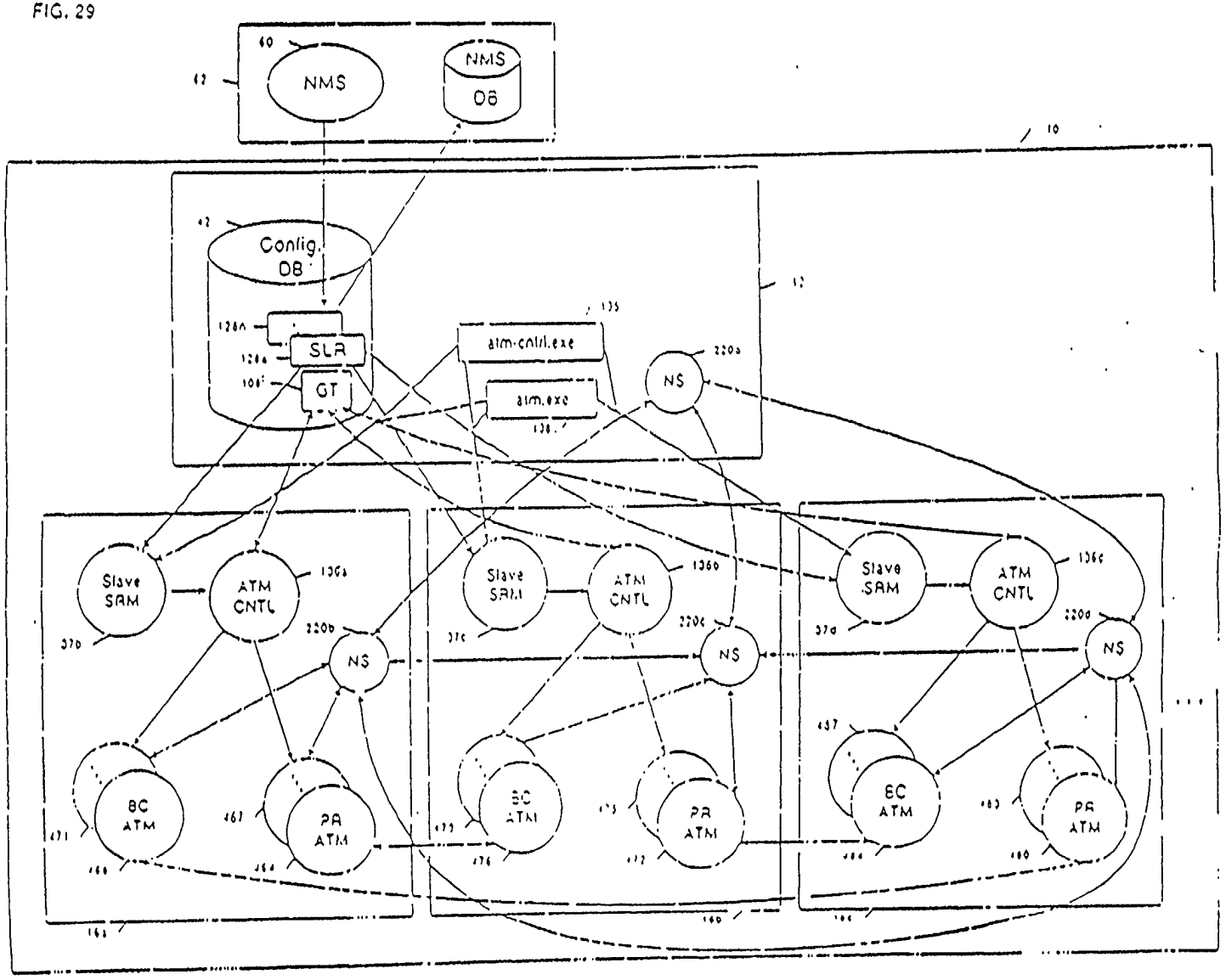

NMS
NMS DB
Config. DB
SLR
GT
atm-cntrl.exe
atm.exe
NS
Slave SAM
ATM CNTL
BC ATM
PR ATM

Fig 30

Table 108

	Group #	Primary Card LID (447)	Backup Card LID (449)	...
450	1	30	31	
451	2	30	31	
452	3	30	31	
453	4	30	31	
454	5	31	32	
455	6	31	32	
456	7	31	32	
457	8	31	32	
458	9	32	30	
459	10	32	30	
460	11	32	30	
461	12	32	30	
	.	.	.	.
	.	.	.	.
	.	.	.	.

Fig. 31a

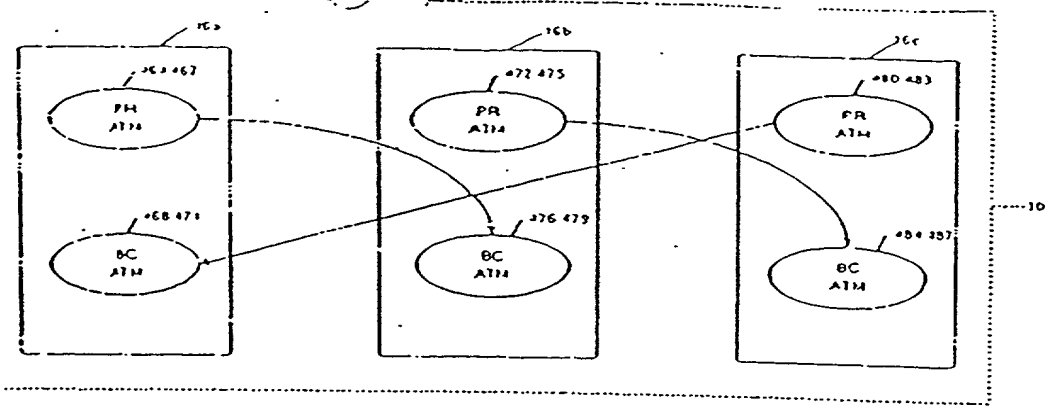


Fig. 31b

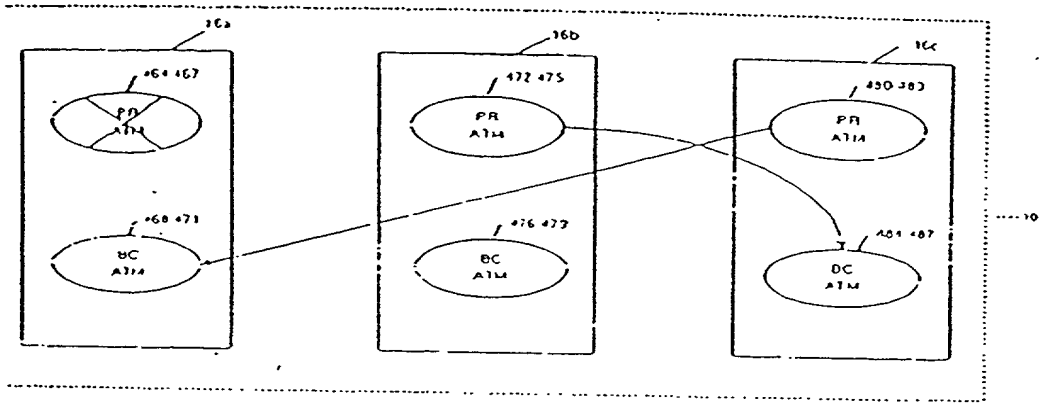
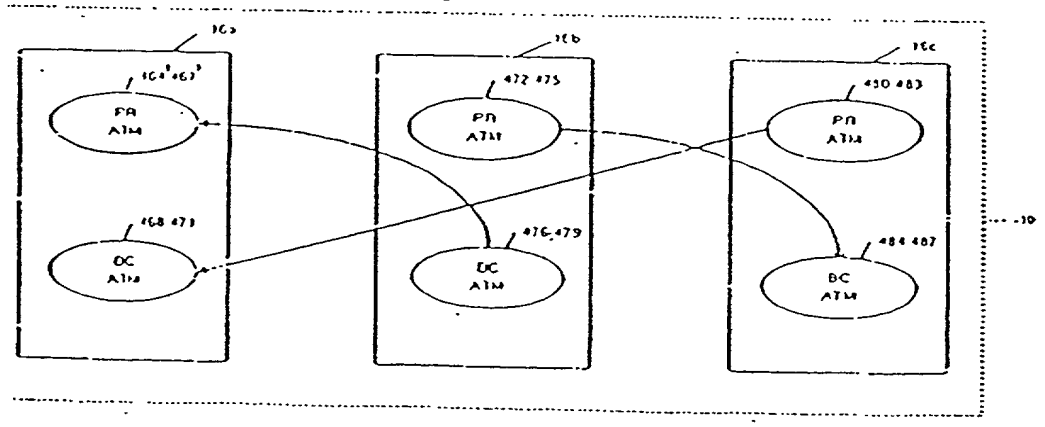


Fig. 31c



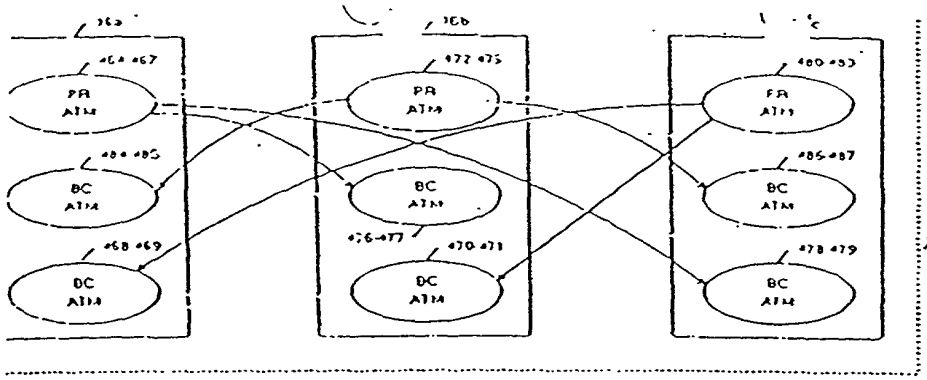


Fig. 37A

Fig. 32b

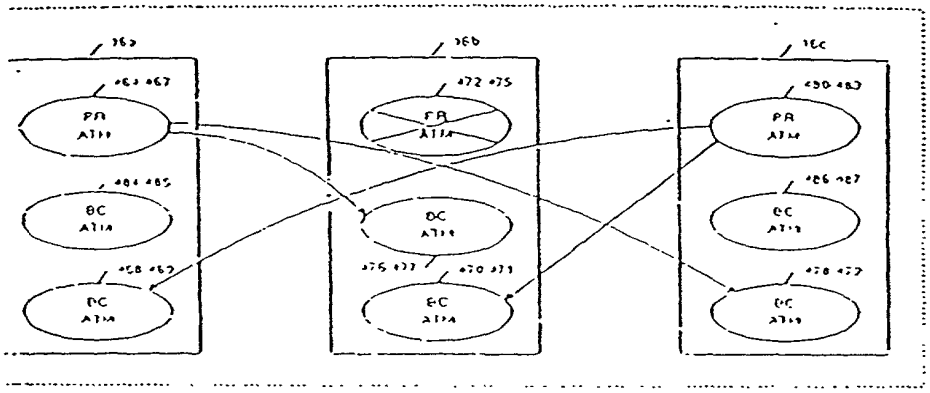
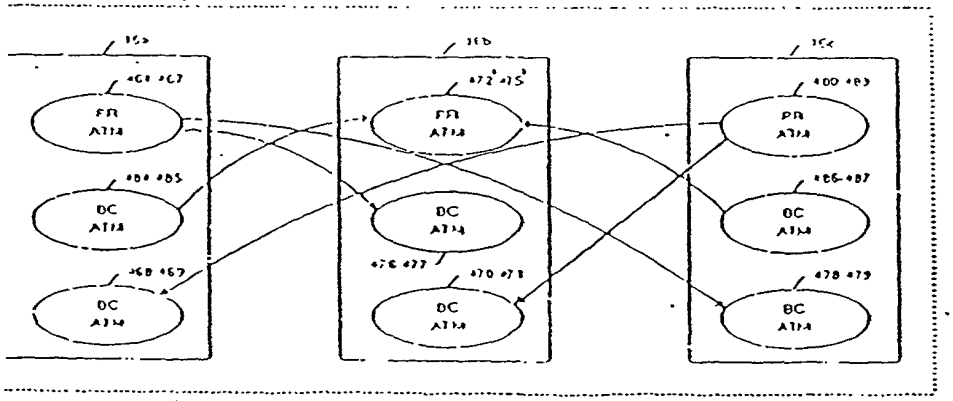
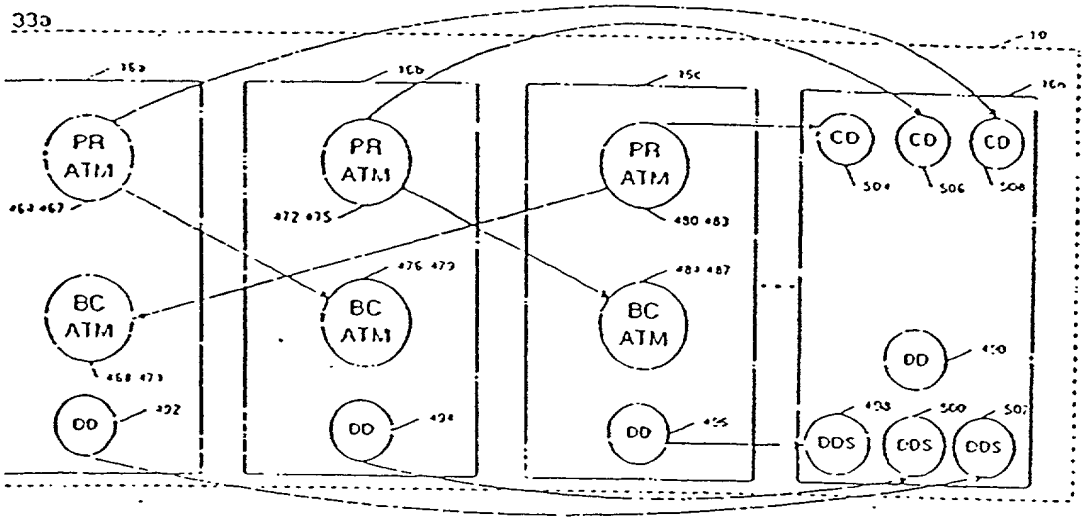


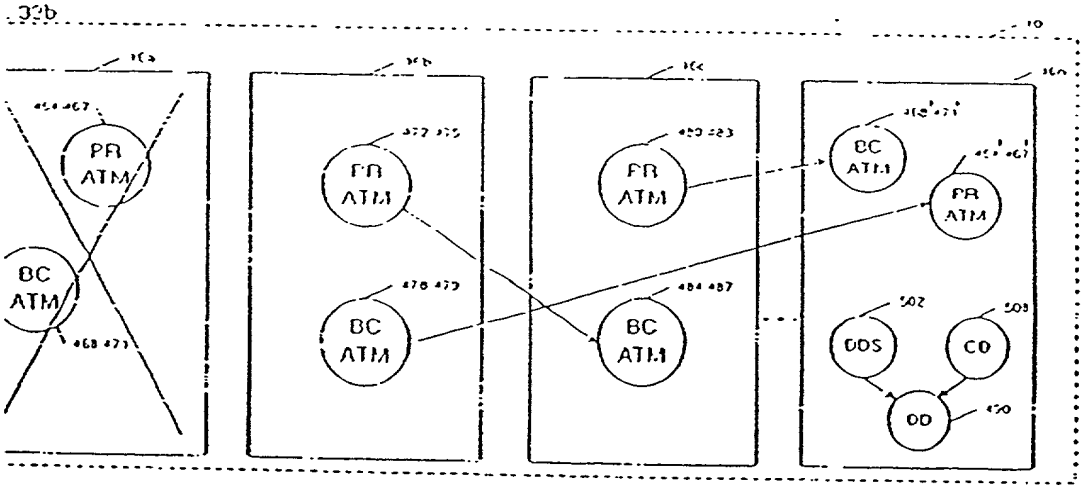
Fig. 32c



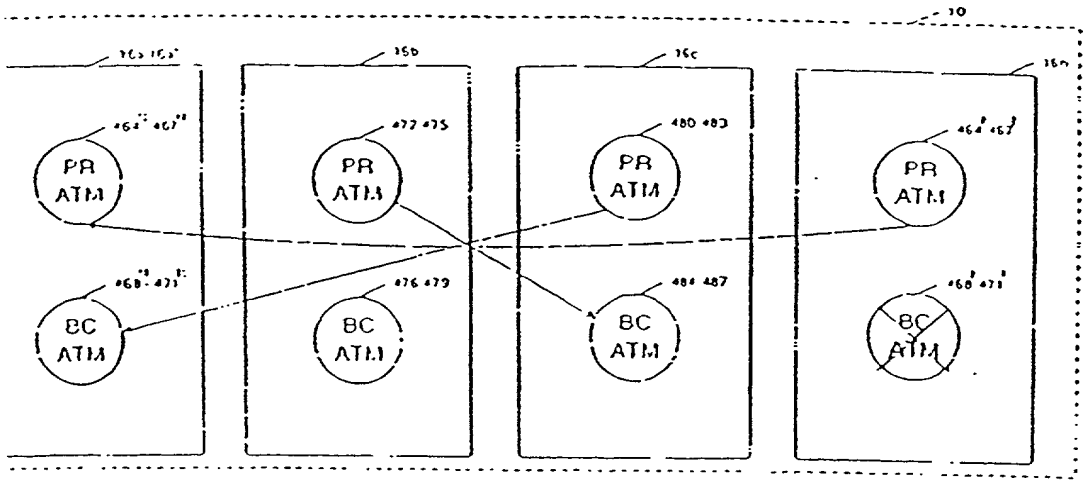
33a



33b



33c


PR ATM
BC ATM
PR ATM
BC ATM
PR ATM
BC ATM
PR ATM
BC ATM

33d

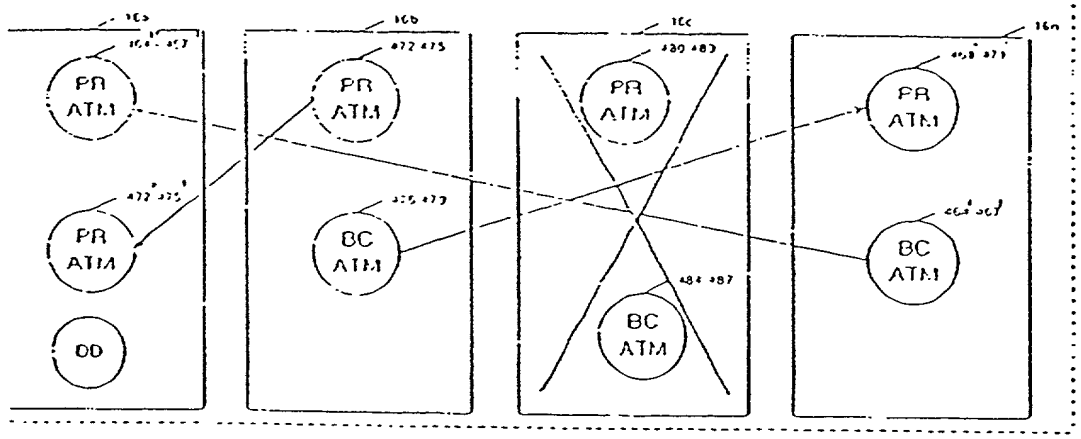
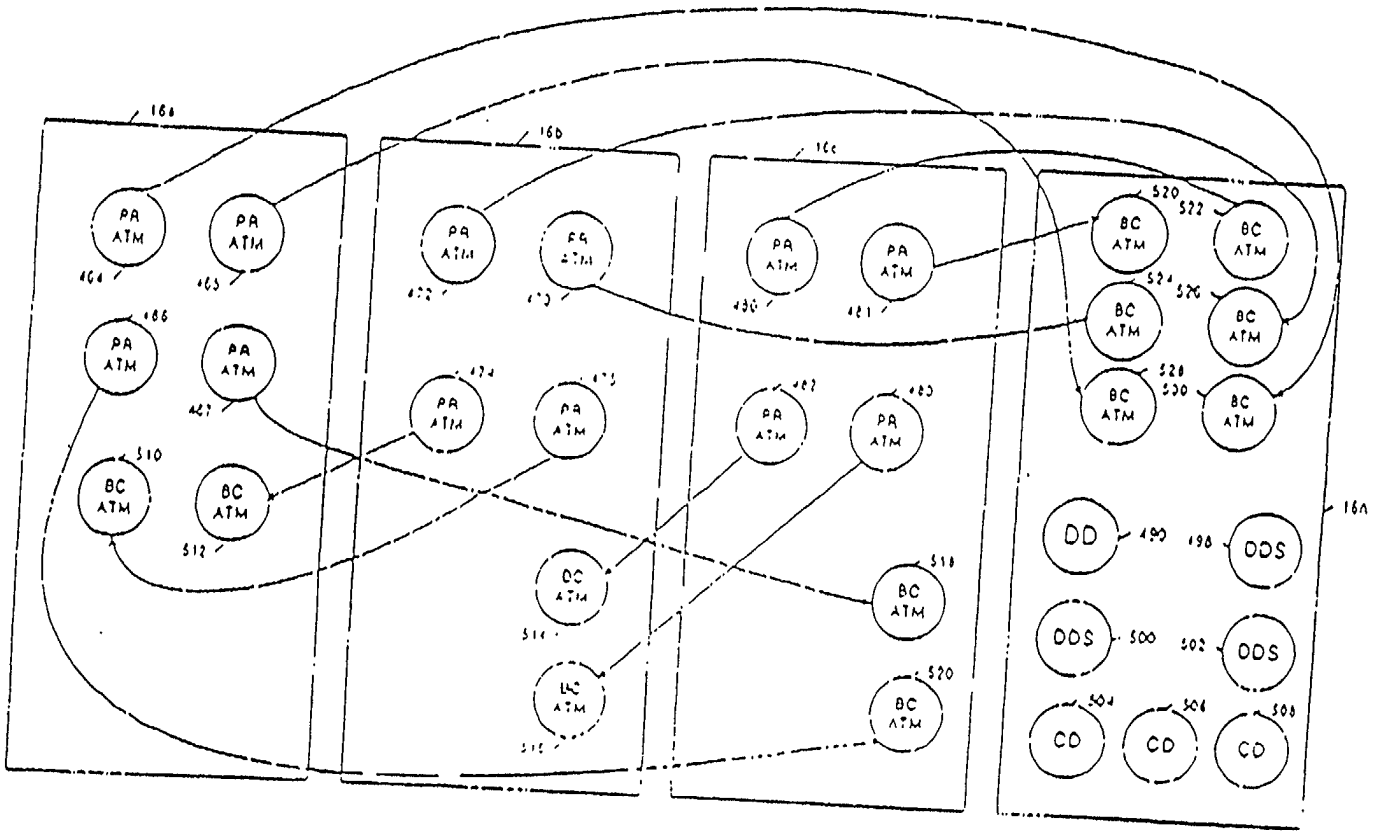

PR ATM
PR ATM
OD
PR ATM
BC ATM
PR ATM
BC ATM
PR ATM
BC ATM

Fig. 34a


160
160
160
PA ATM
BC ATM
DC ATM
LC ATM
DD
DDS
CD
510
512
514
516
518
520
522
524
526
528
530
160
490
498
500
502
504
506
508

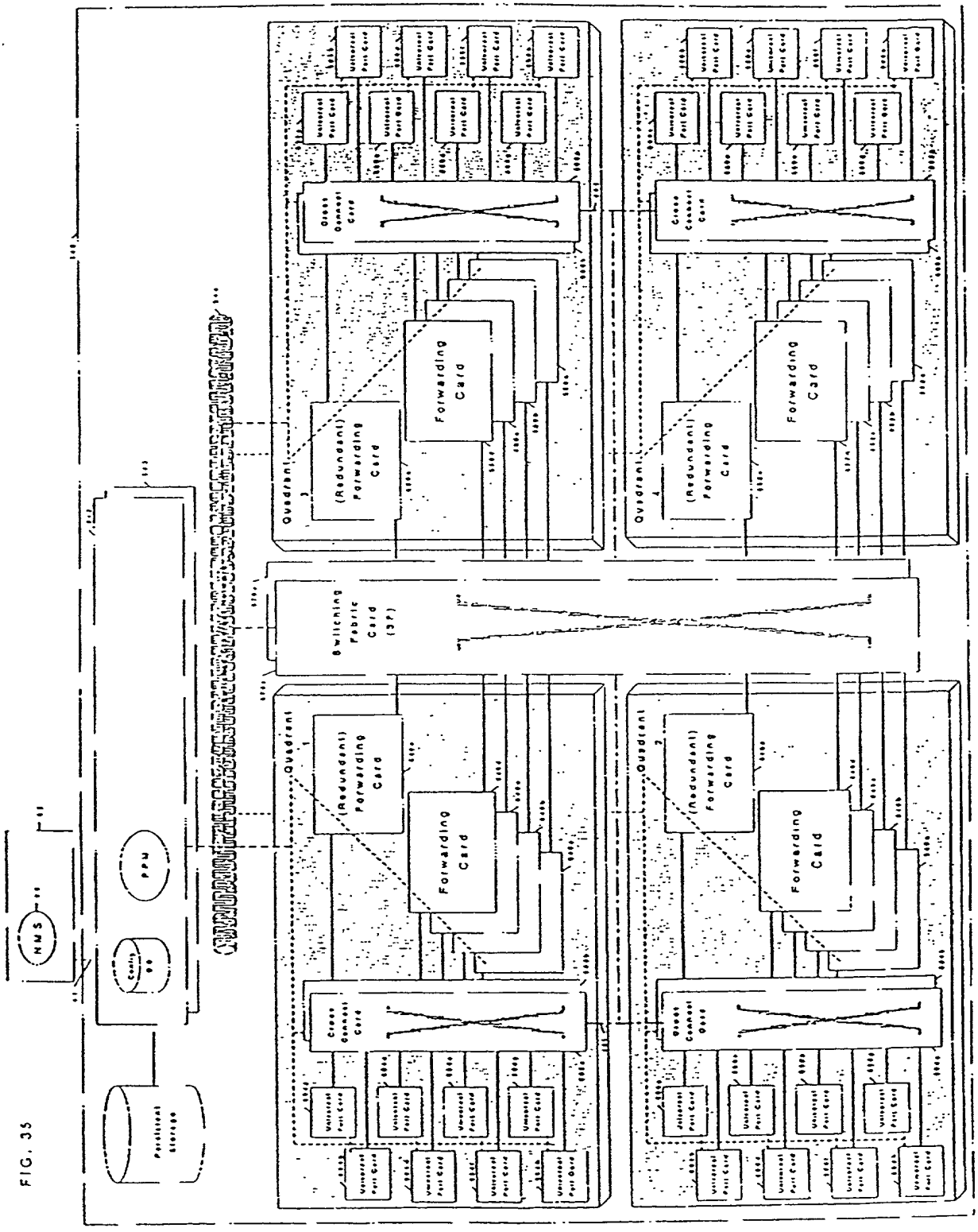

NMS
PPM
Quadrant
(Redundant) Forwarding Card
Forwarding Card
Switching Fabric Card (3F)
Cross Connect Card
Universal Port Card

FIG. 35

FIG. 36

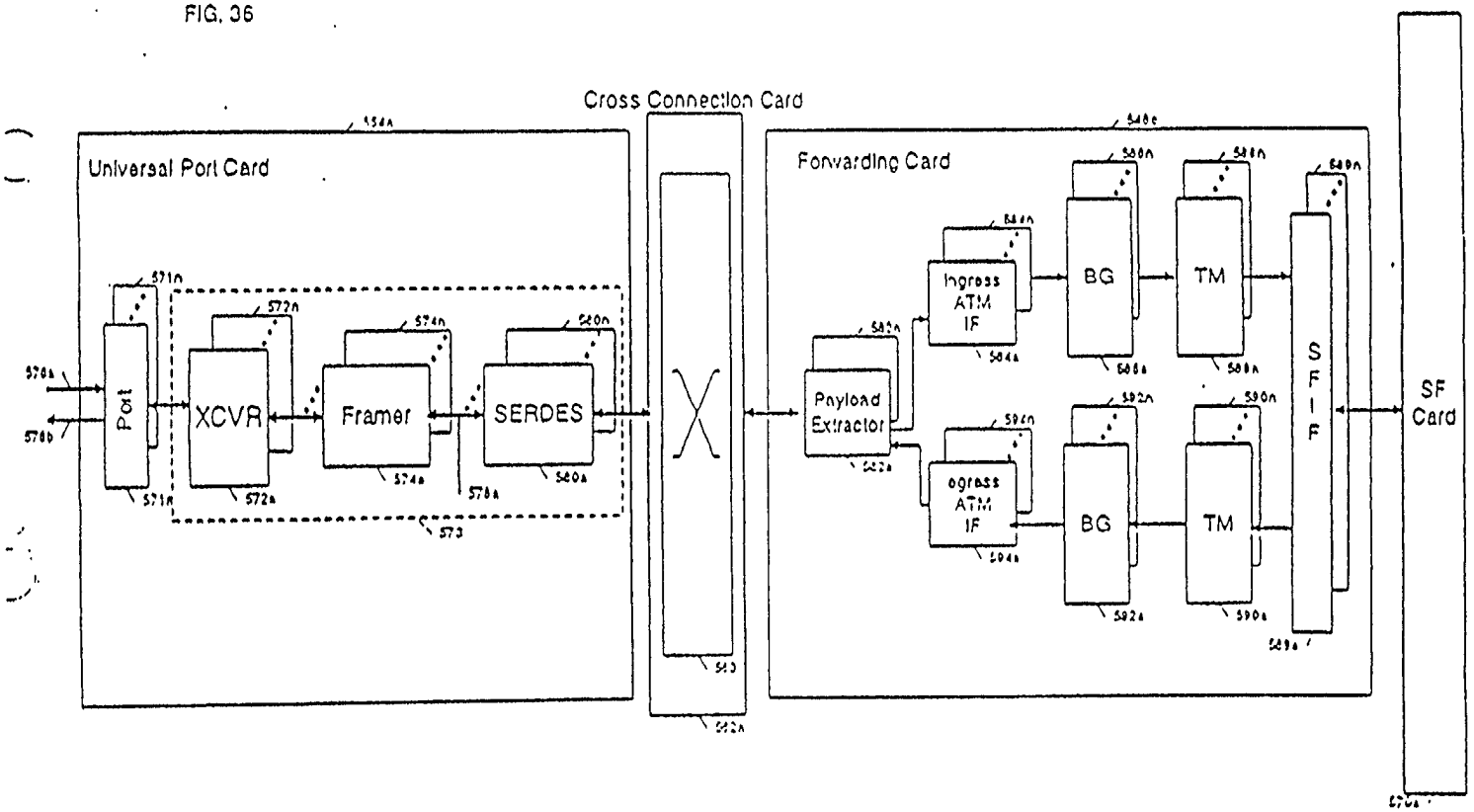

Cross Connection Card
Universal Port Card
Forwarding Card
Port
XCVR
Framer
SERDES
Payload Extractor
Ingress ATM IF
ogress ATM IF
BG
BG
TM
TM
S F I F
SF Card

FIG. 37

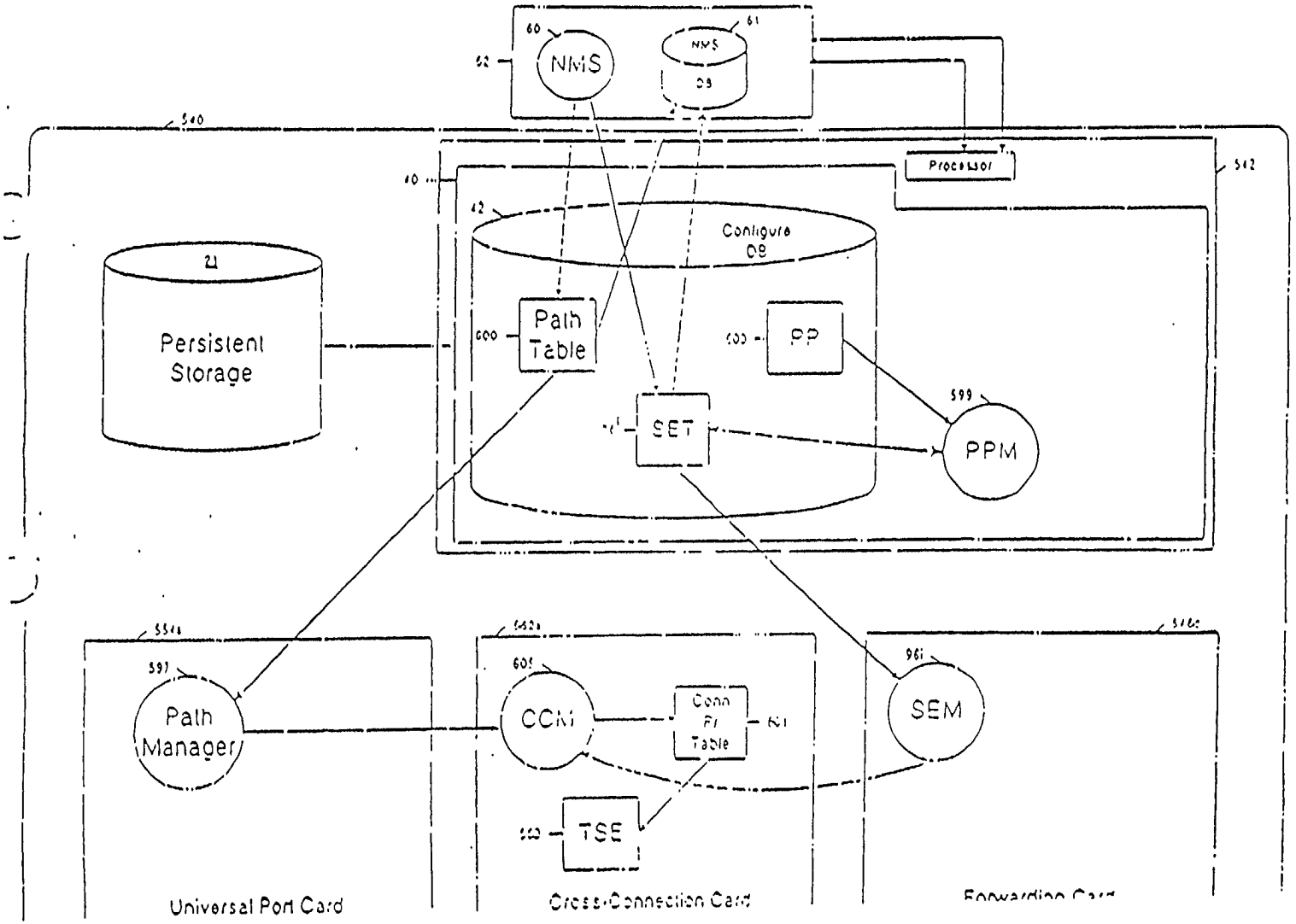

NMS
NMS DB
Processor
Configure DB
Persistent Storage
Path Table
PP
SET
PPM
Path Manager
CCM
Conn PI Table
TSE
SEM
Universal Port Card
Cross-Connection Card

FIG. 38

Path Table 600

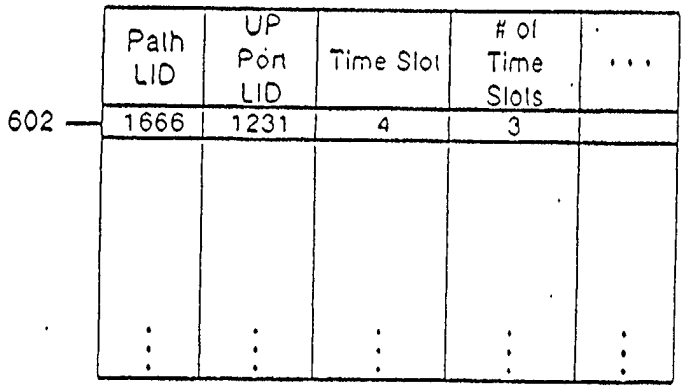


FIG. 39

Service End Point Table 76'

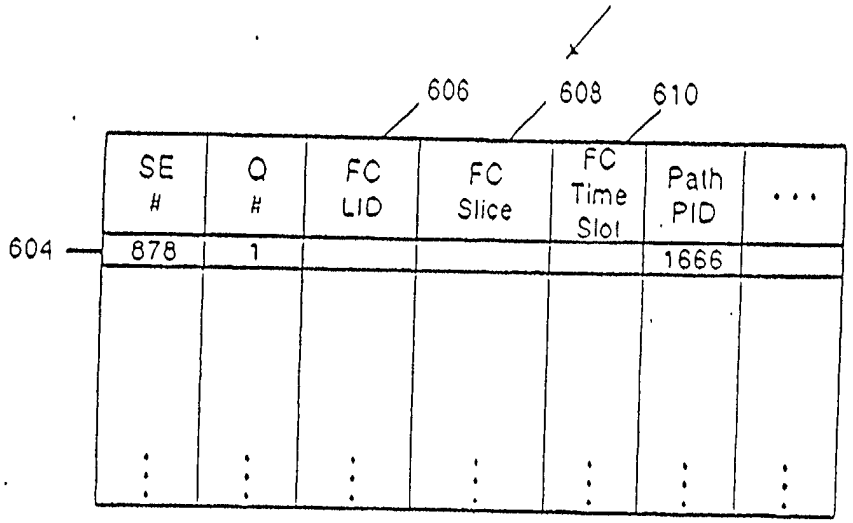


Fig. 40

Sent By: Equipe Communications; 781 795 2031; Jul-6-00 4:25PM; Page 2

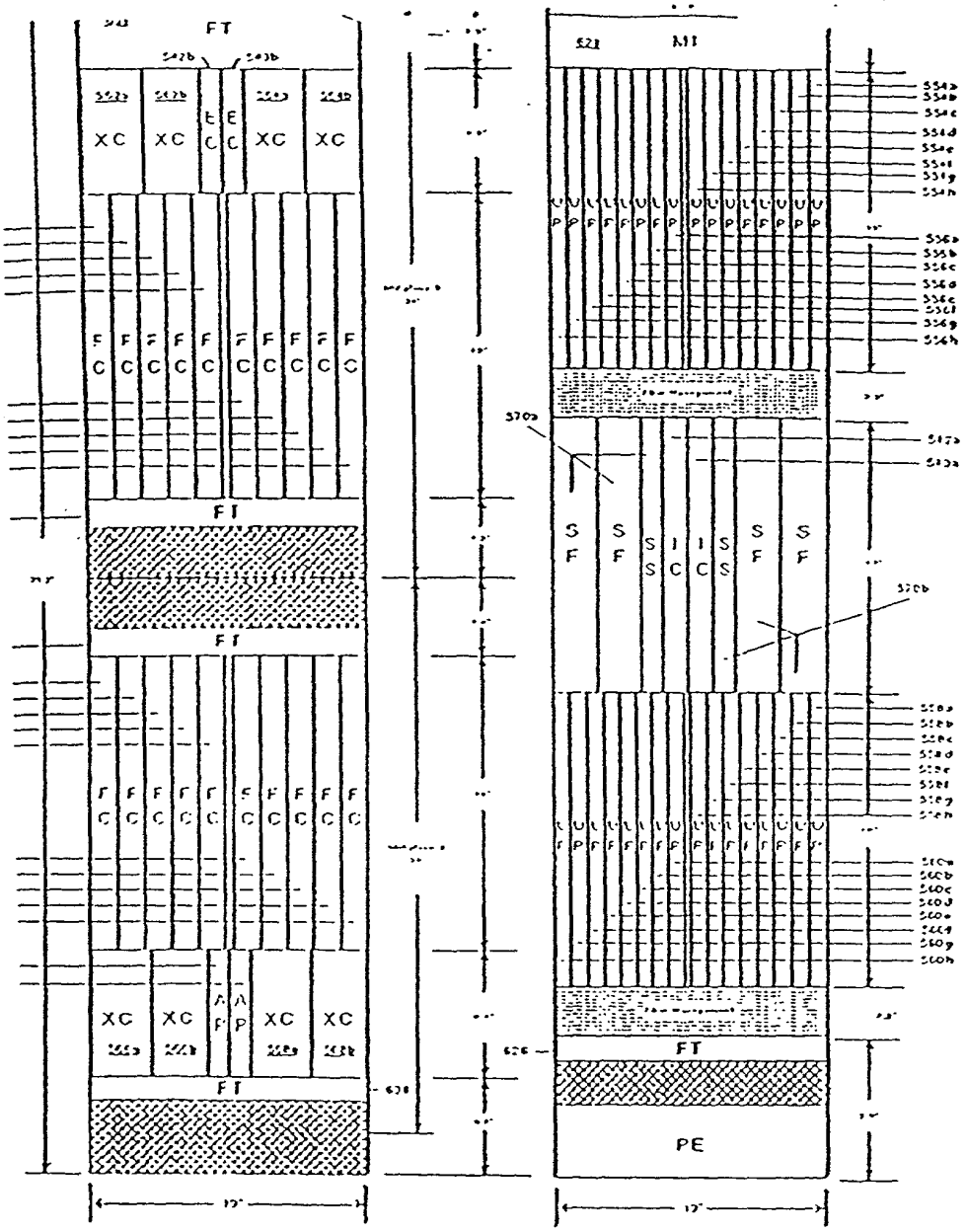
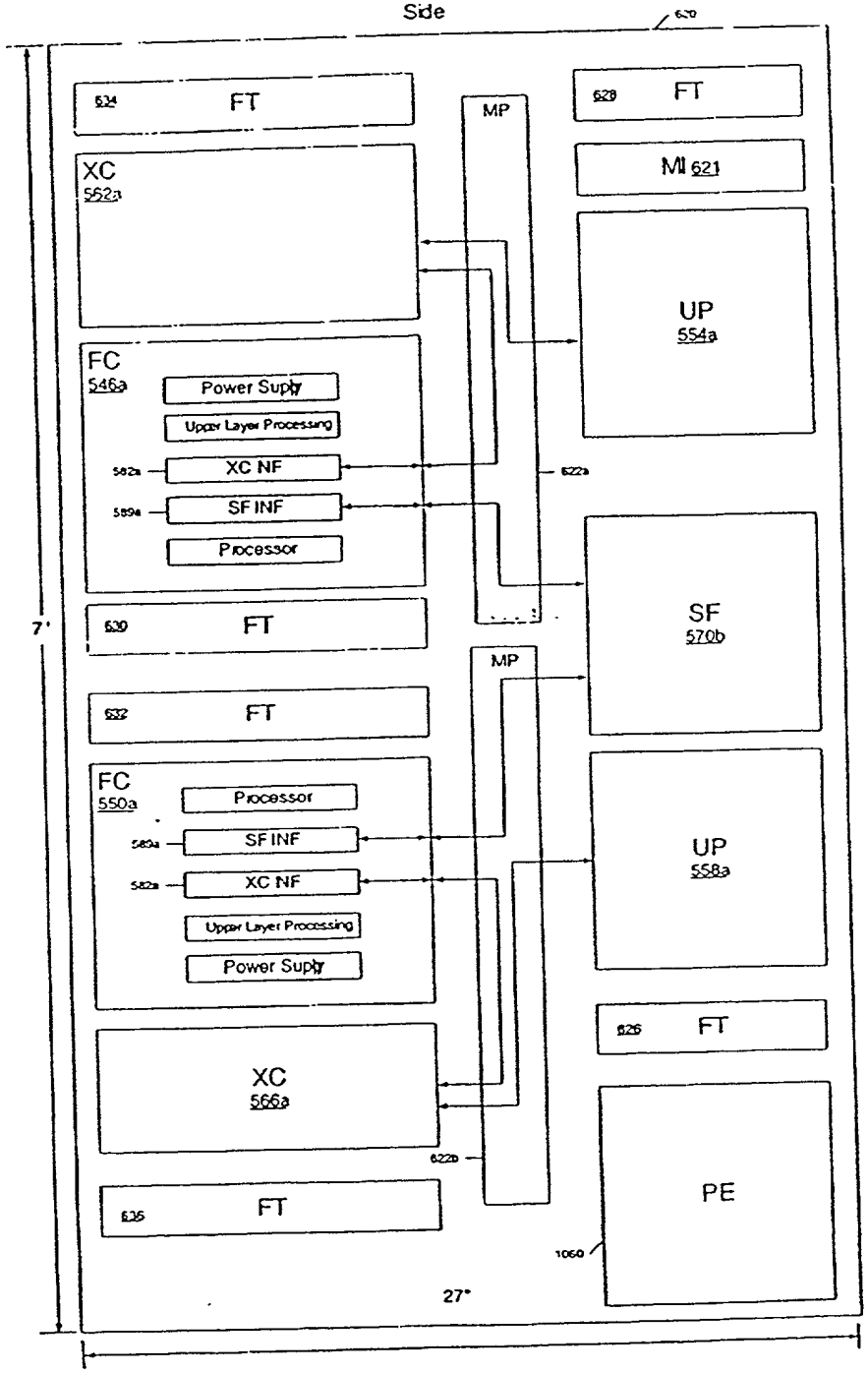


Fig. 41A

Fig. 41B

FIG. 41c
Side


624
FT
XC
562a
FC
546a
Power Supply
Upper Layer Processing
582a
XC NF
584a
SF INF
Processor
630
FT
632
FT
FC
550a
Processor
580a
SF INF
582a
XC NF
Upper Layer Processing
Power Supply
XC
566a
635
FT
7'
MP
628
FT
MI 621
UP
554a
622a
SF
570b
MP
UP
558a
626
FT
622b
PE
1060
27'

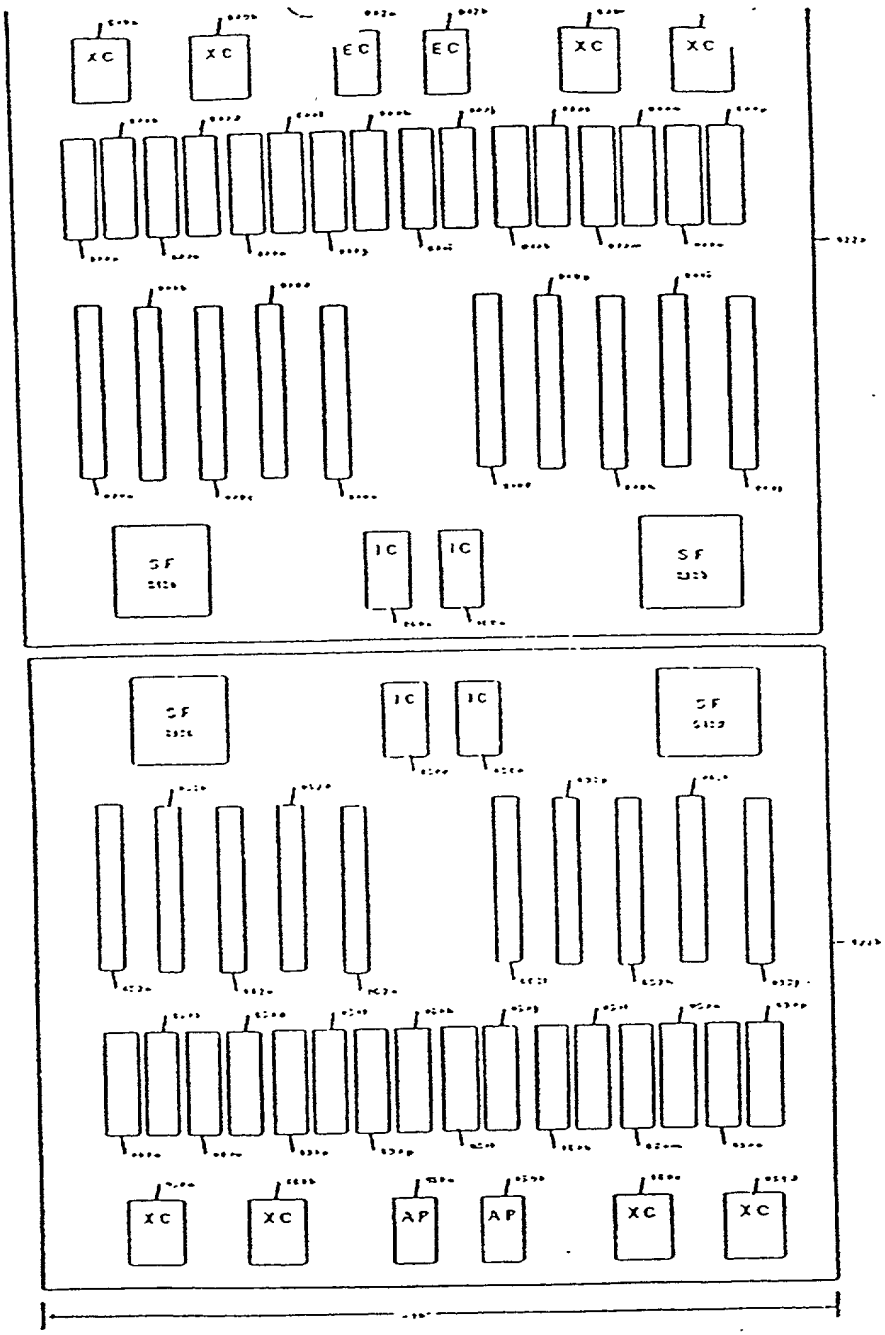
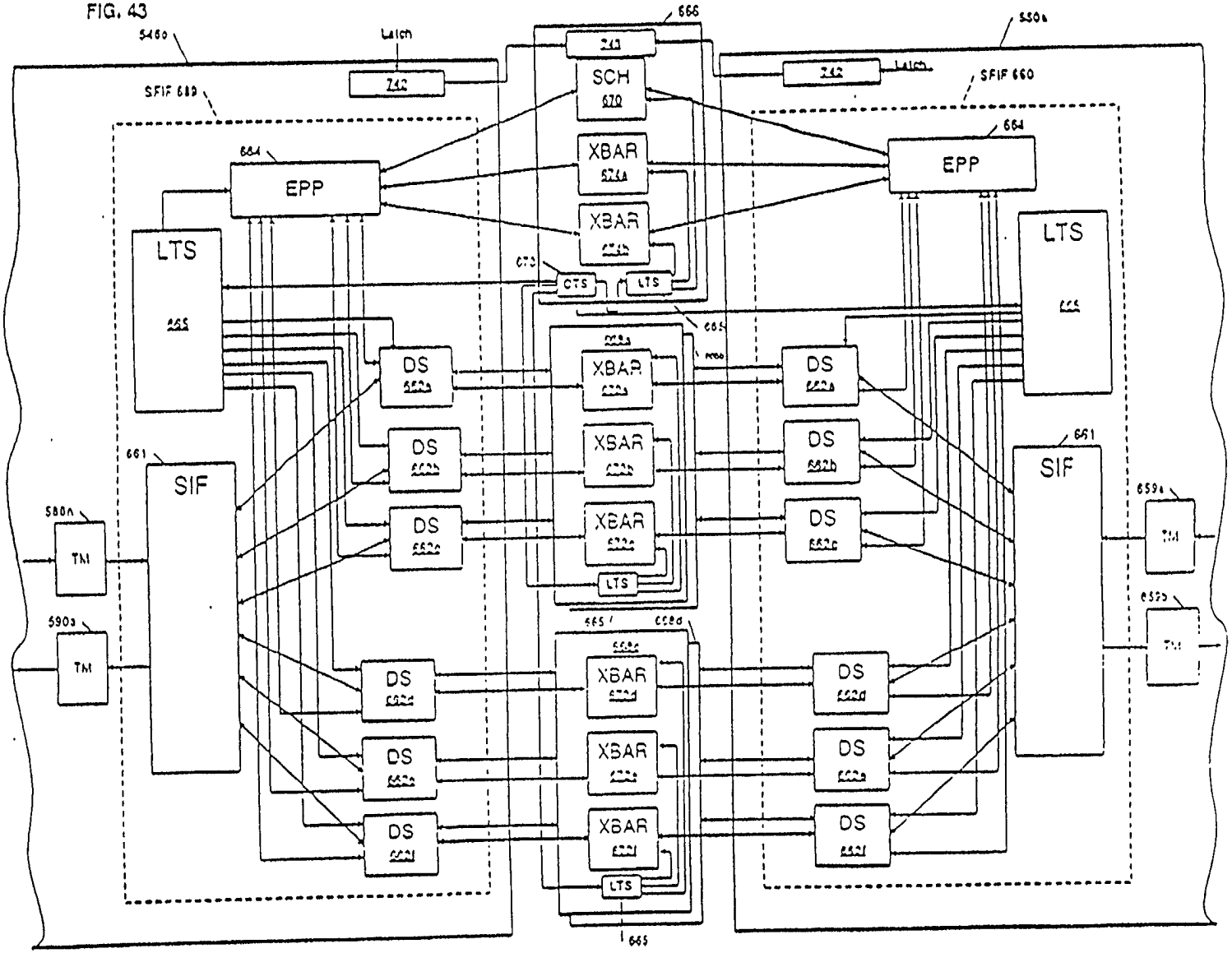


Fig. 42

FIG. 43


SCH
XBAR
XBAR
EPP
EPP
LTS
LTS
CTS
CTS
LTS
SIF
SIF
TM
TM
DS
DS
DS
DS
DS
DS
XBAR
XBAR
XBAR
XBAR
XBAR
XBAR
LTS
LTS
Latch
Latch
SFIF 660
SFIF 660

ent By: Equipe Communications; 781 795 2031; Jul-6-00 4:26PM; Page 4

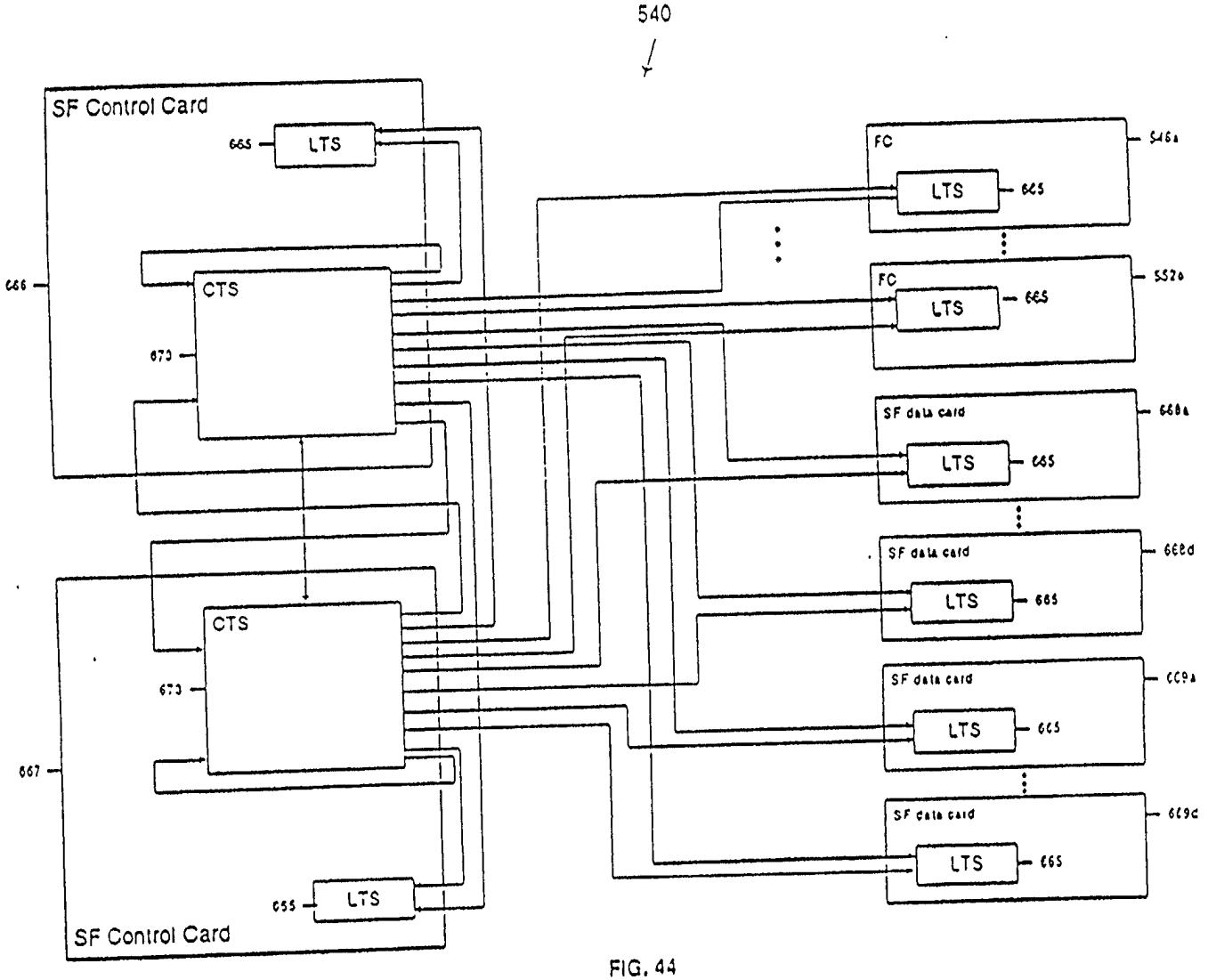
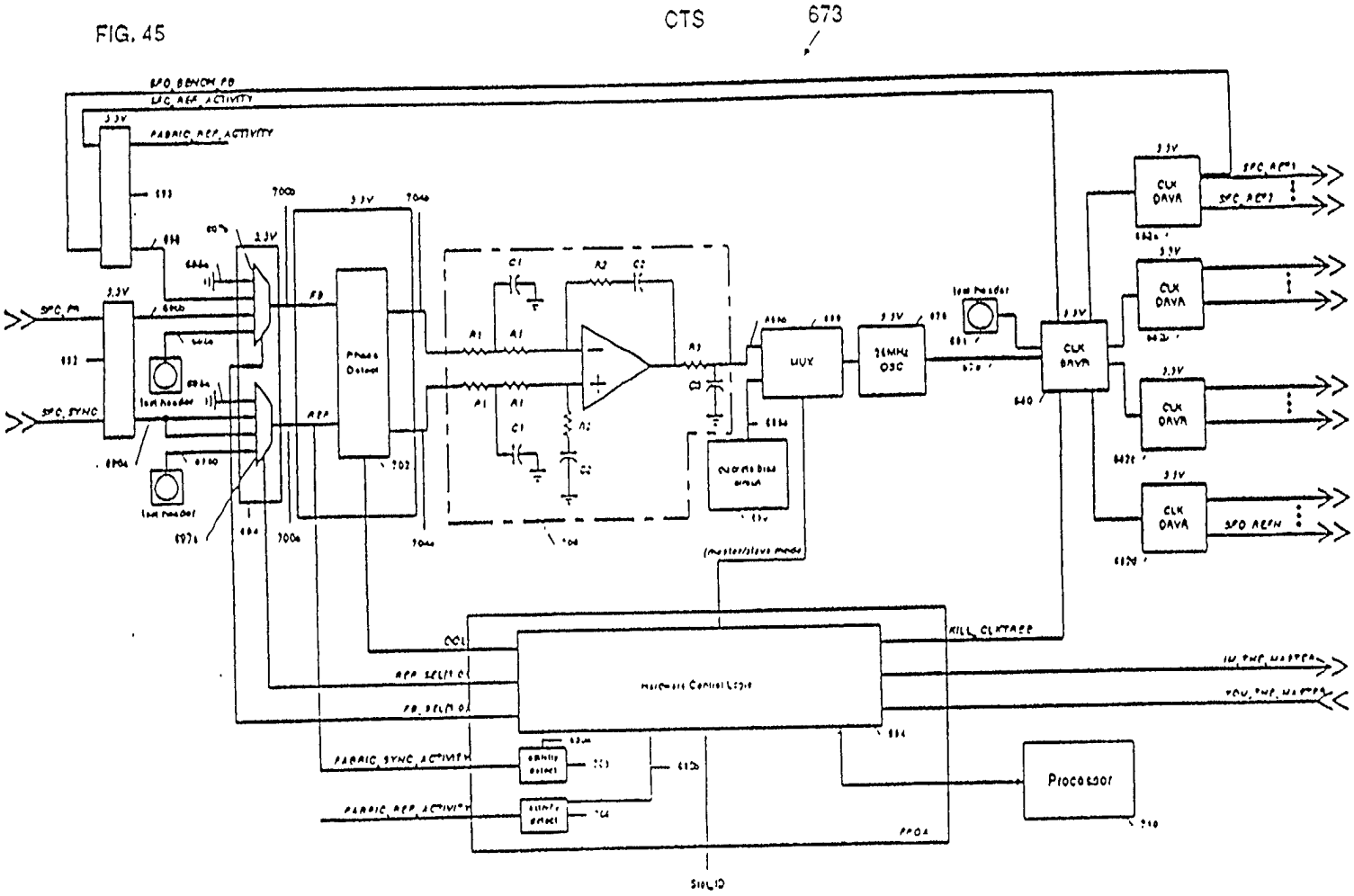


FIG. 44

FIG. 45



Sent By: Equipe Communications; 781 795 2031; Jul-6-00 4:26PM; Page 5

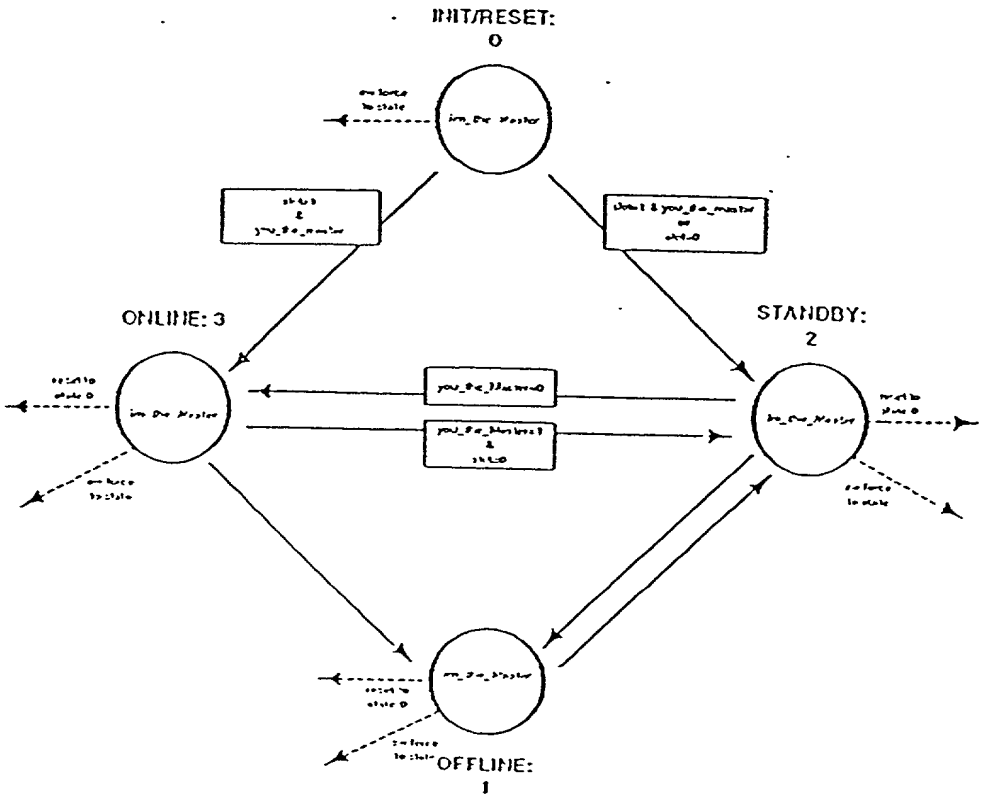


FIG. 46

Jul-6-00 4:26PM; 781 795 2031; nt By: Equipe Comunications;

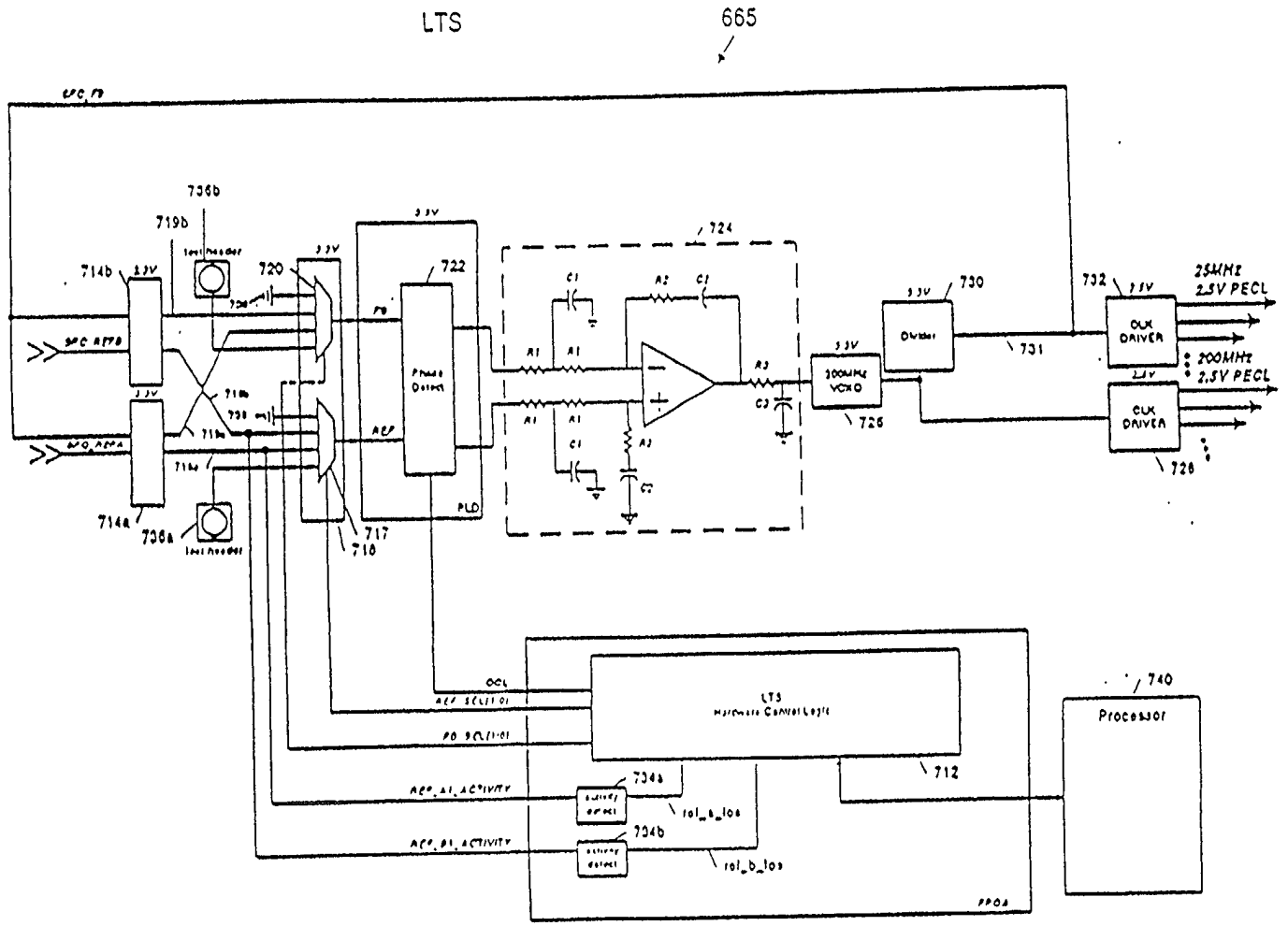


FIG. 47

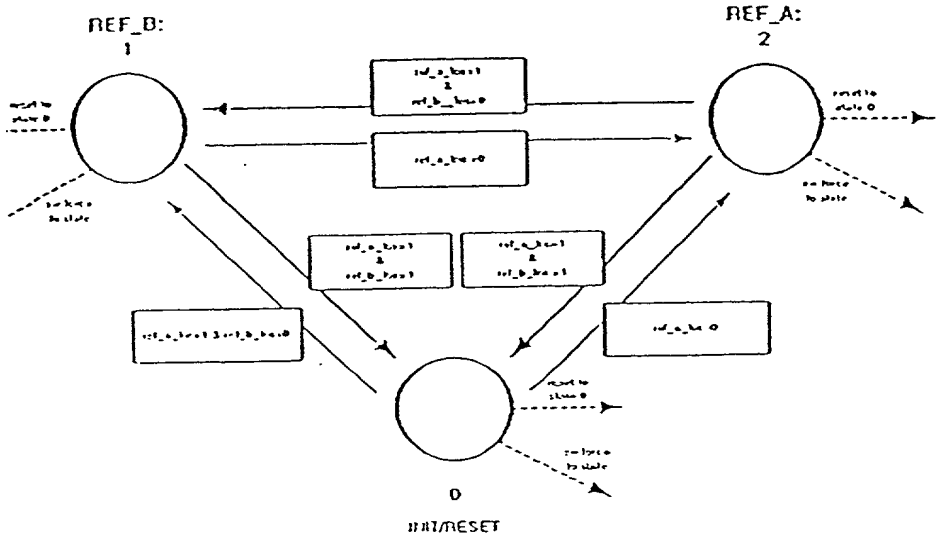


FIG. 48

Sent By: Equipe Communications; 781 795 2031; Jul-6-00 4:27PM; Page 9

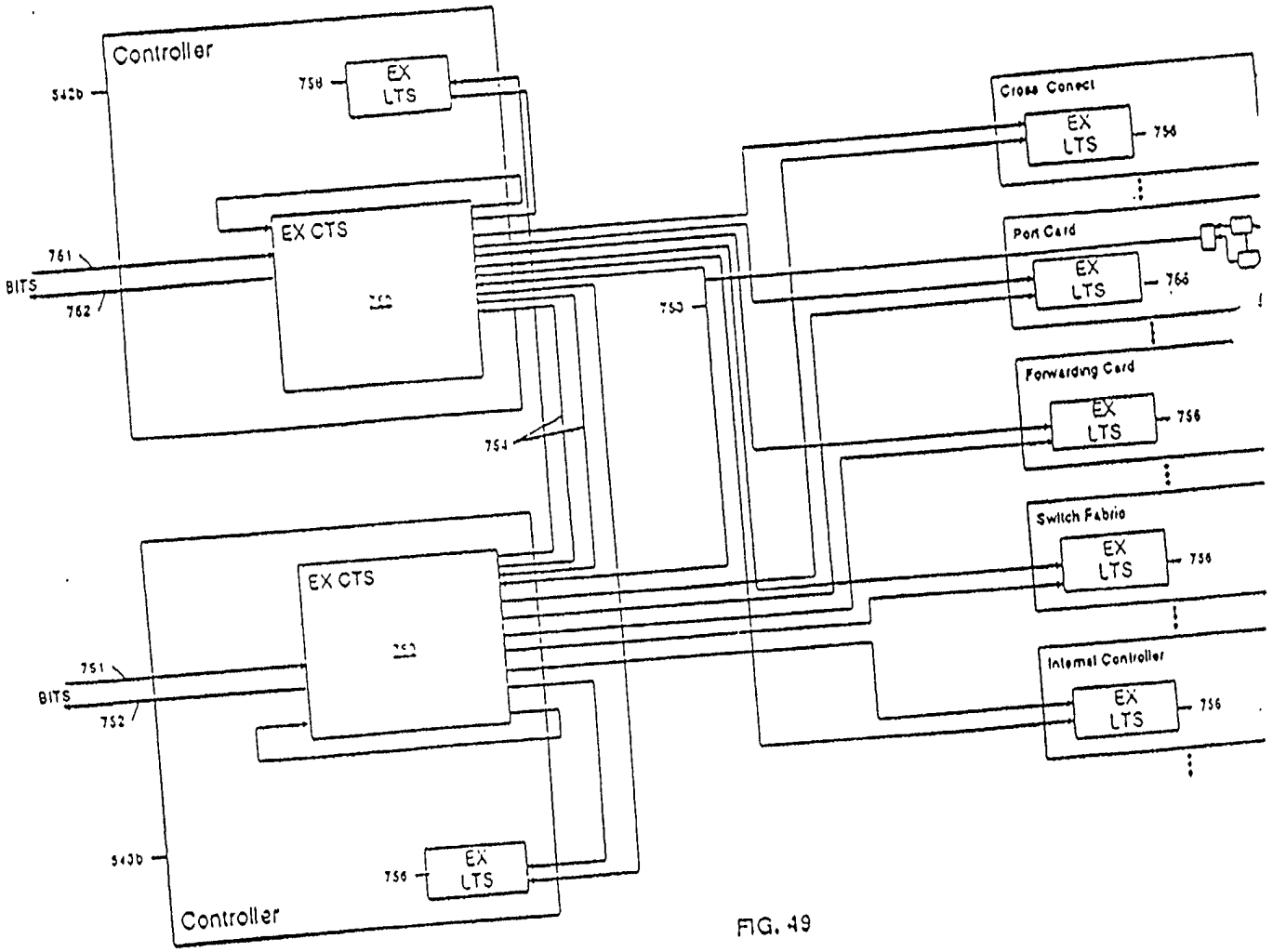


FIG. 49

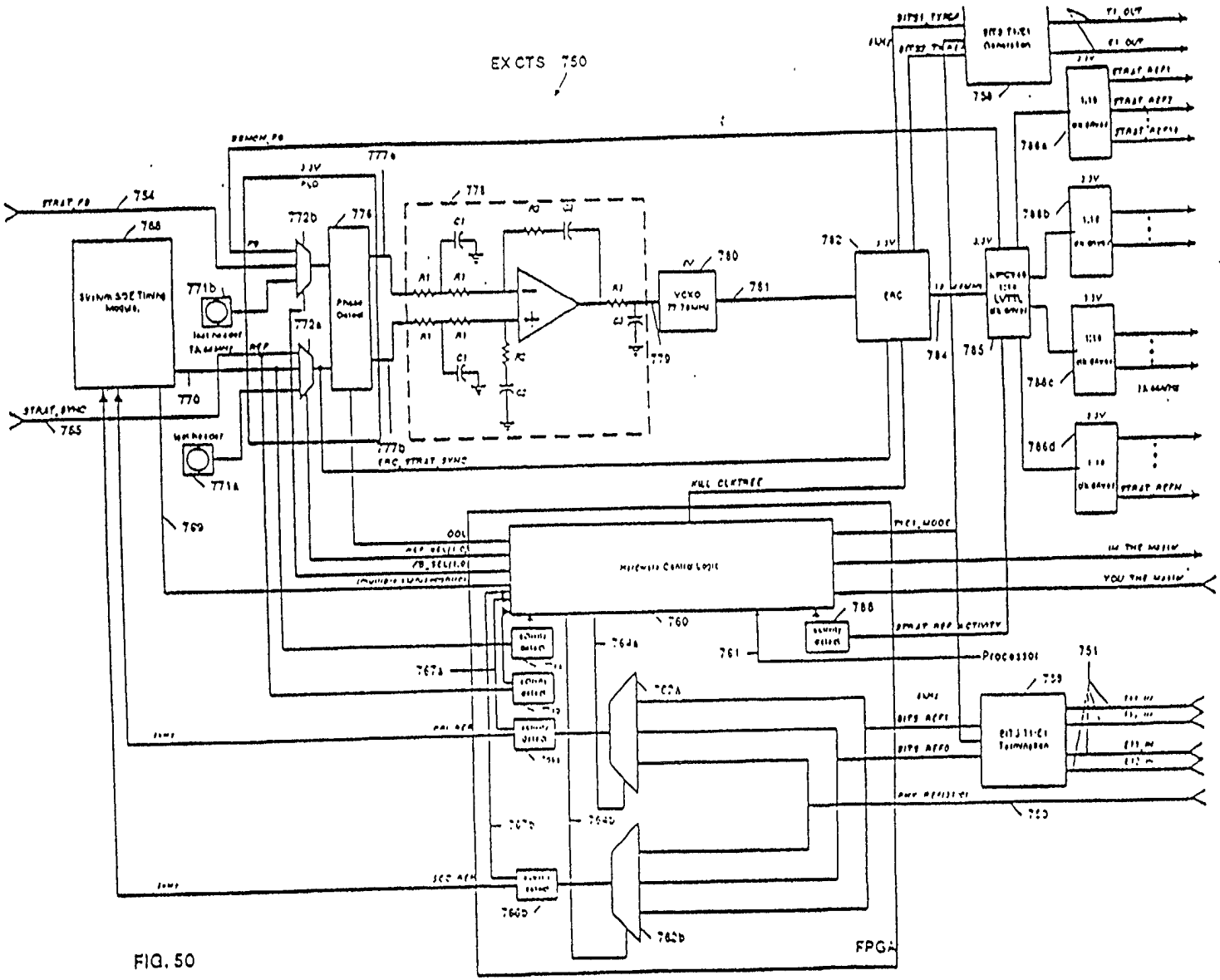


FIG. 50

Applied Micro

FIG. 51

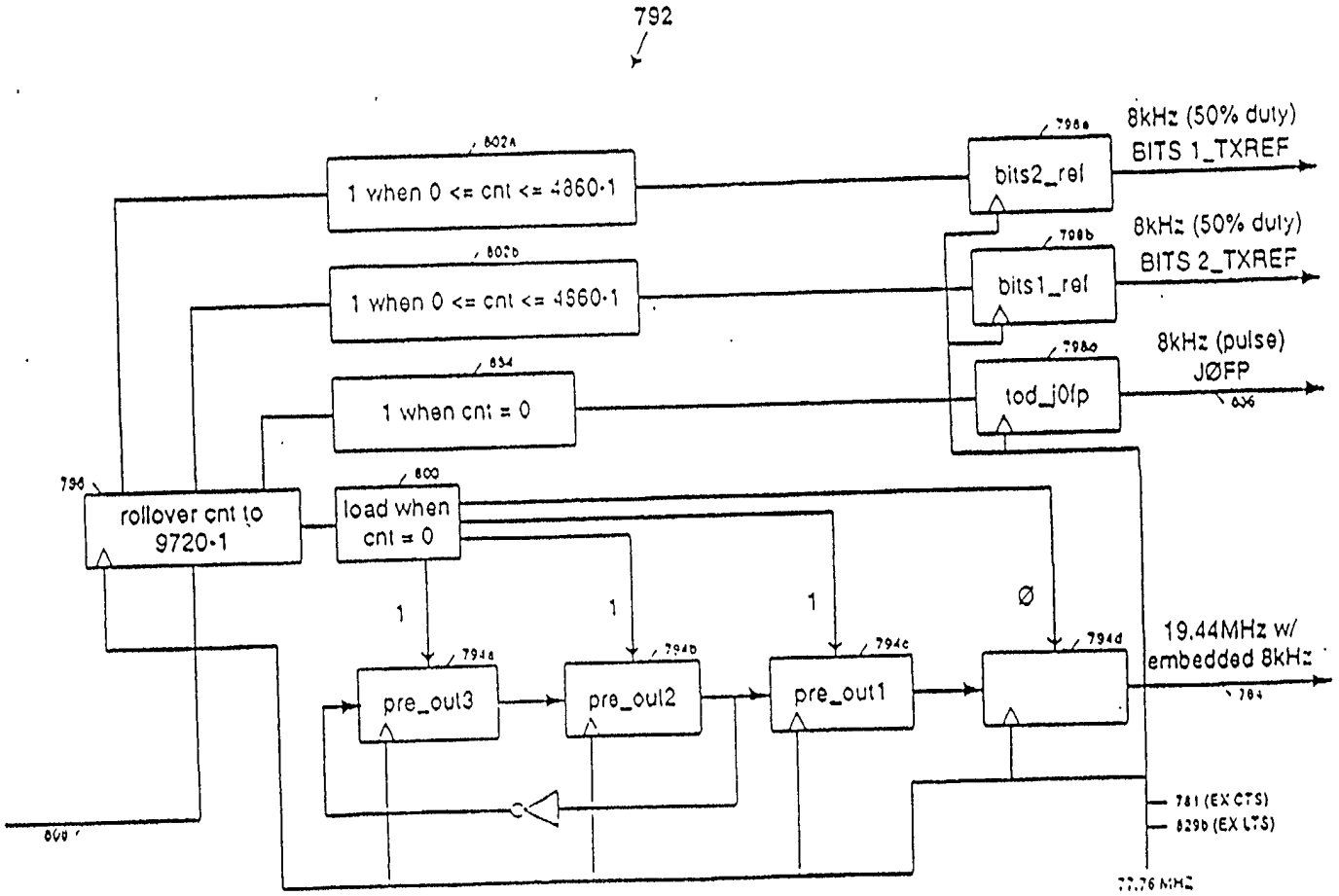

792
802A
1 when 0 <= cnt <= 4860-1
802b
1 when 0 <= cnt <= 4860-1
834
1 when cnt = 0
796
rollover cnt to 9720-1
800
load when cnt = 0
1
1
1
Ø
798a
bits2_rel
8kHz (50% duty) BITS 1_TXREF
798b
bits1_rel
8kHz (50% duty) BITS 2_TXREF
798c
tod_j0fp
8kHz (pulse) JØFP
636
794a
pre_out3
794b
pre_out2
794c
pre_out1
794d
19.44MHz w/ embedded 8kHz
784
781 (EX CTS)
829b (EX LTS)
77.76 MHz
808

Fig. 52

Exhibit 1028

Examiner

FIG. 53

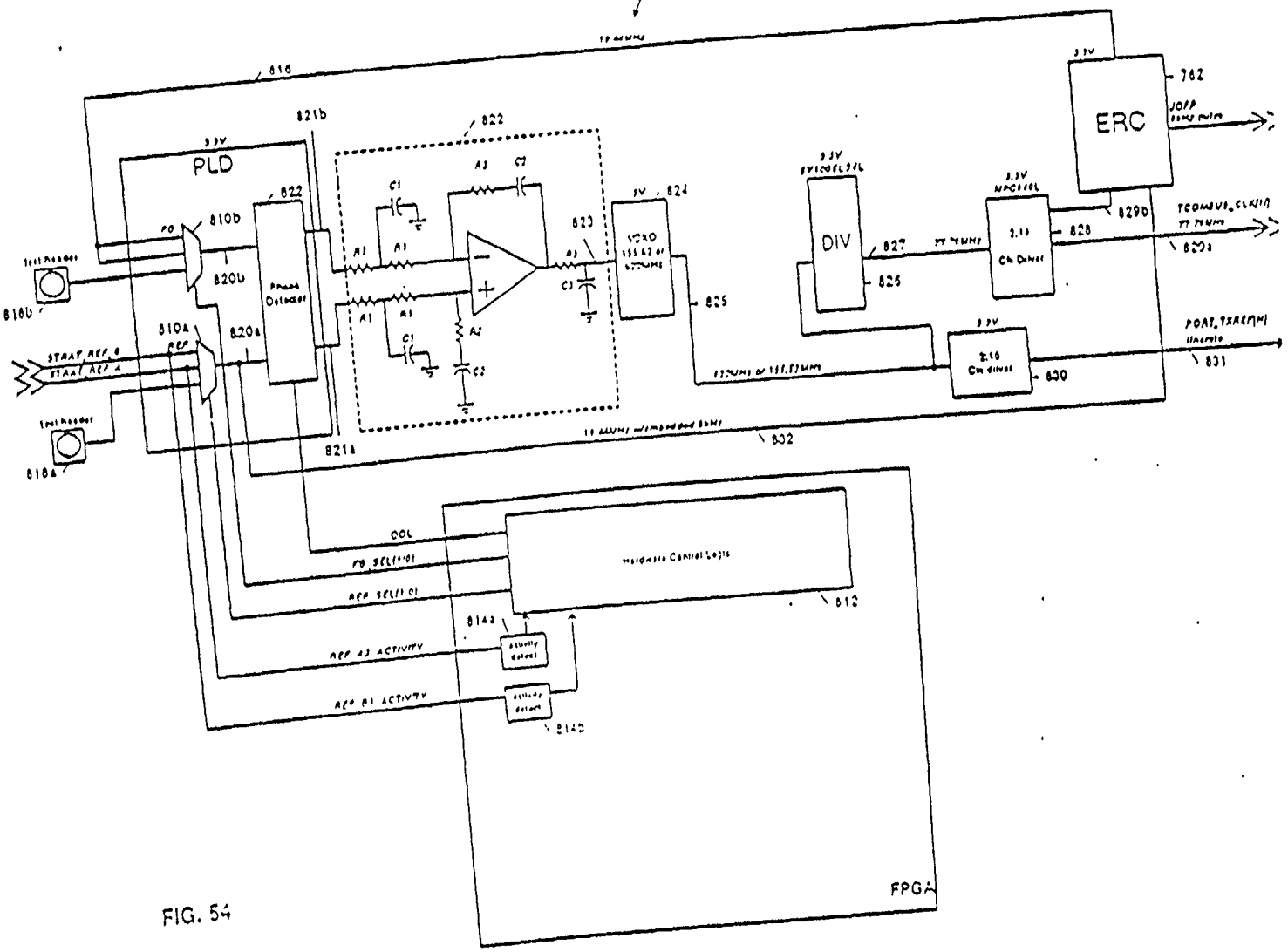
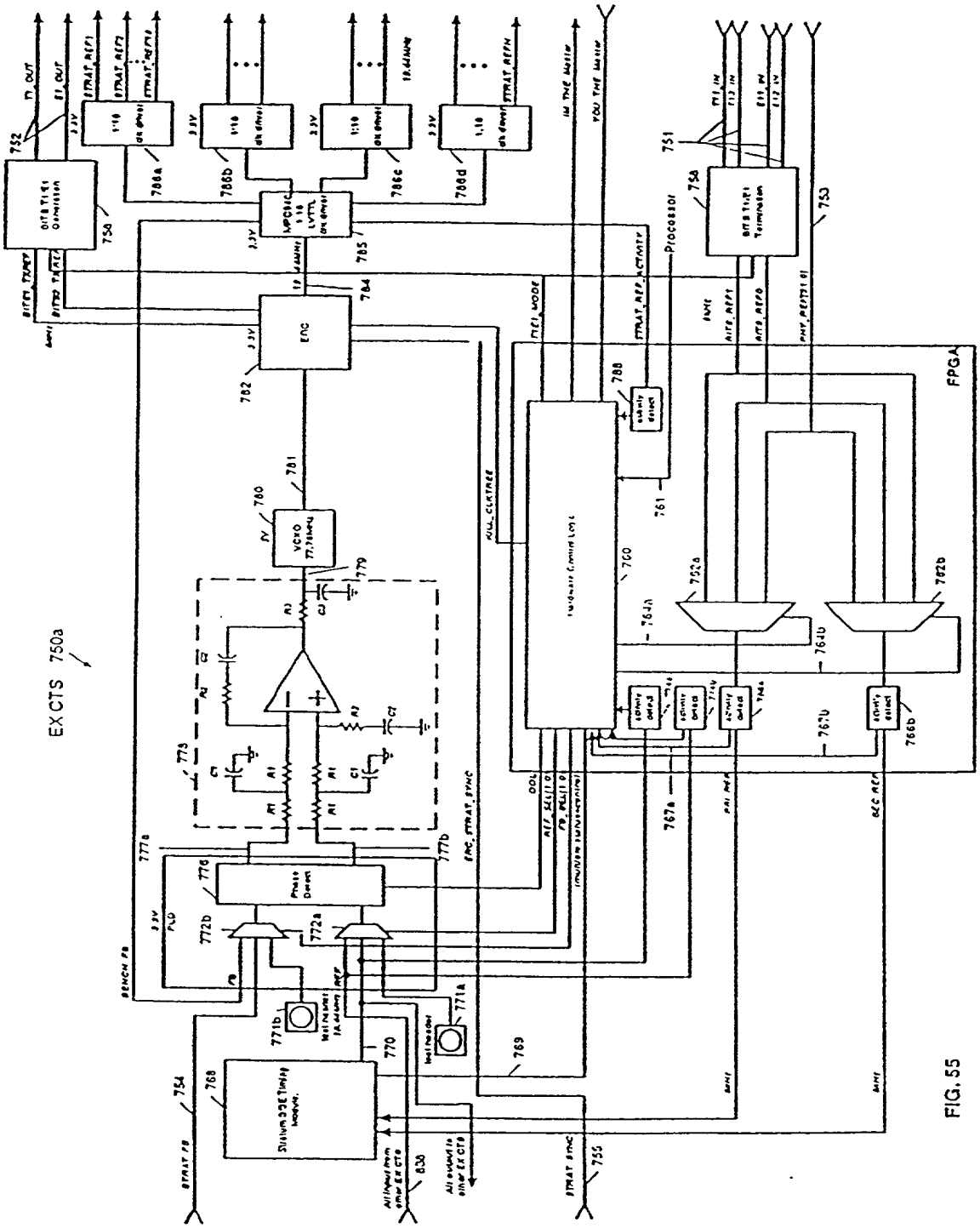

PLD
ERC
DIV
FPGA
816
822
824
826
828
830
831
832
810b
820b
810a
820a
821b
821a
816a
816b
Phase Detector
VCXO
Activity detect
Activity detect
ACR A1 ACTIVITY
ACR A2 ACTIVITY
FB SEL[1:0]
ACR SEL[1:0]
OOL

FIG. 54


EXCTS 750a
FPGA
FIG. 55

Sent By: Equipe Communications; 781 795 2031; Jul-12-00 3:57PM; Page 3/5

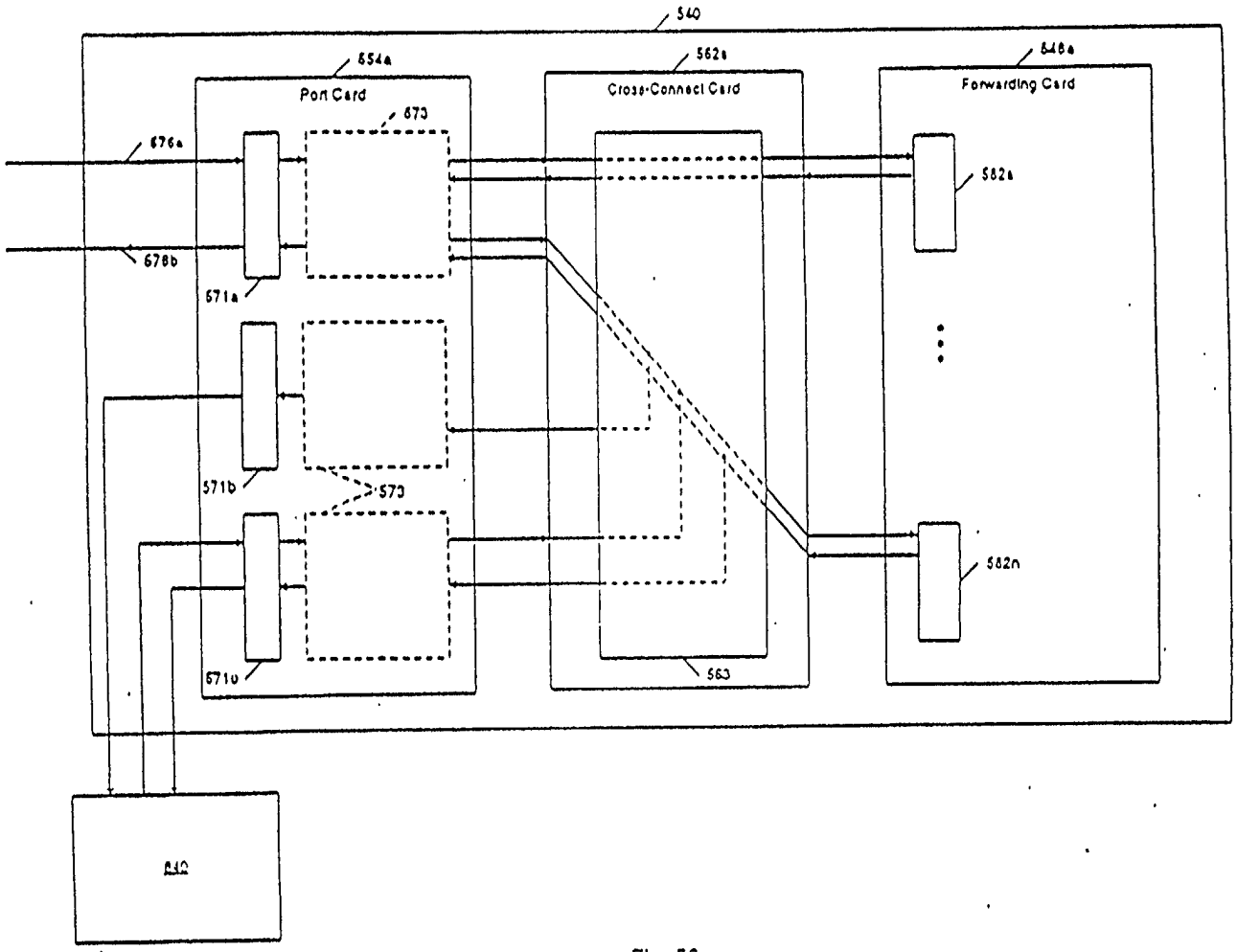
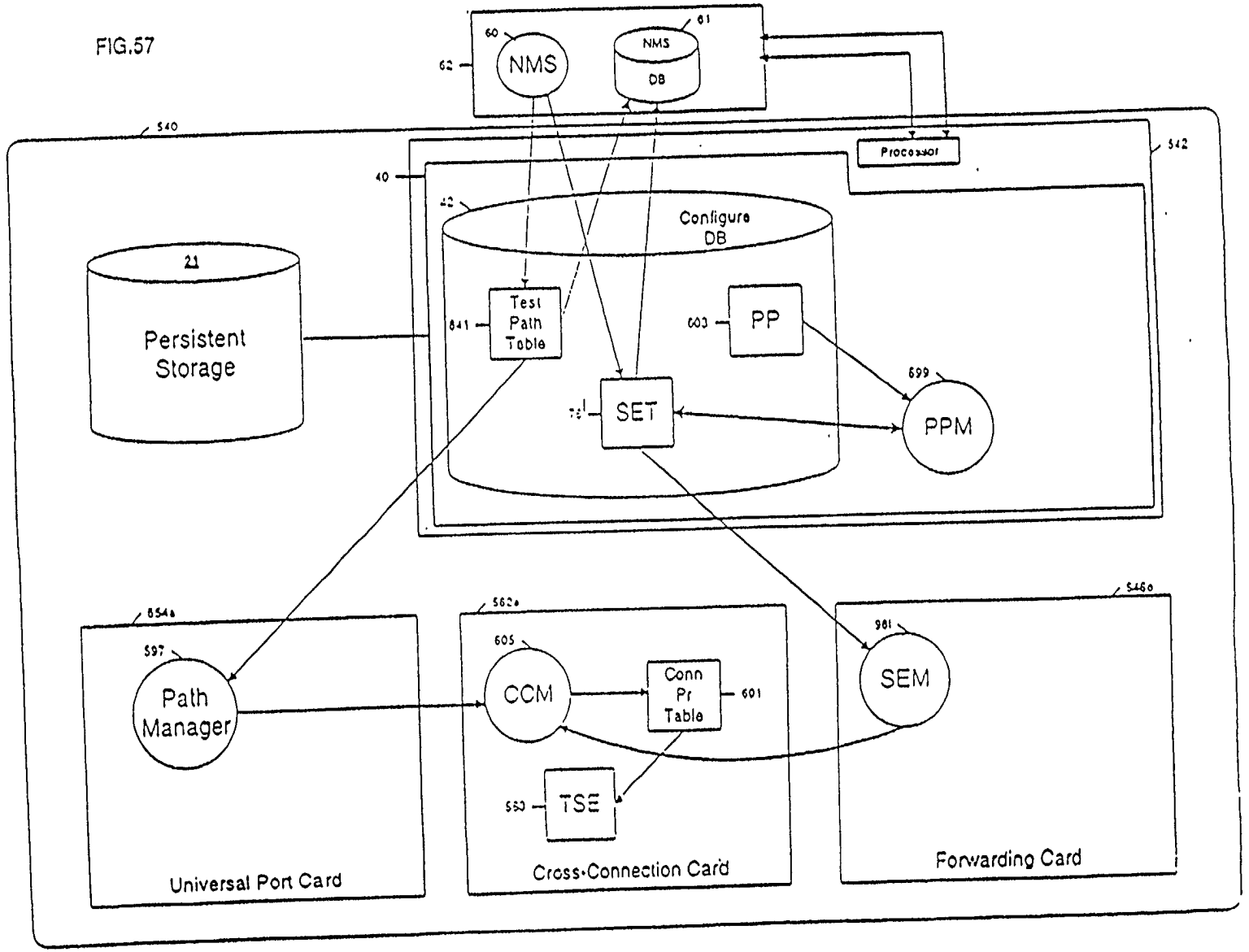


Fig. 56

Sent By: Equipe Communications; 781 795 2031; Jul-12-00 3:57PM; Page 4/5

FIG.57



TO6THO" 0TE8E80O

Sent By: Equipe Communications; 781 795 2031; Jul-12-00 3:57PM; Page 5/5

FIG. 58

Test Path Table 841

	Path LID	UP Port LID	Time Slot	# of Time Slots	Monitor	Enable Port Receiver	...
842	1666	1232	4	3	Ingress	No	
843	1666	1233	4	3	Egress	No	
844	1666	1233	4	3	Ingress	Yes	
	⋮	⋮	⋮	⋮			⋮

844 845

Fig. 60a

Managed Device Table

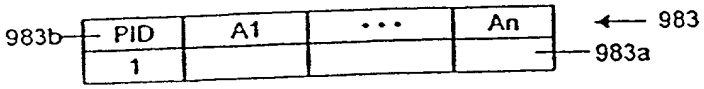


Fig. 60b

Chassis Table

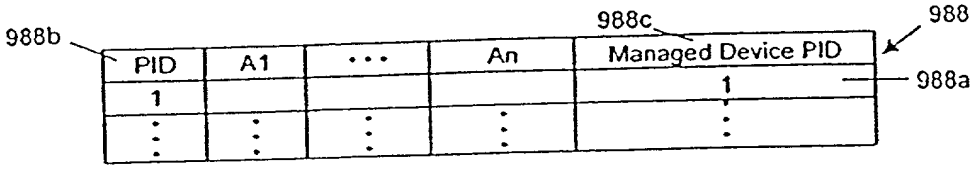


Fig. 60c

Shelf Table

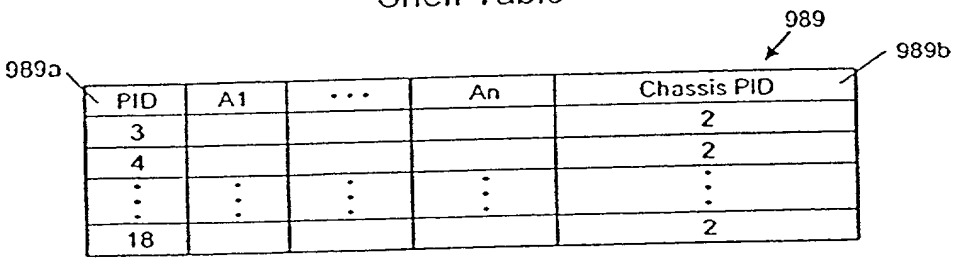
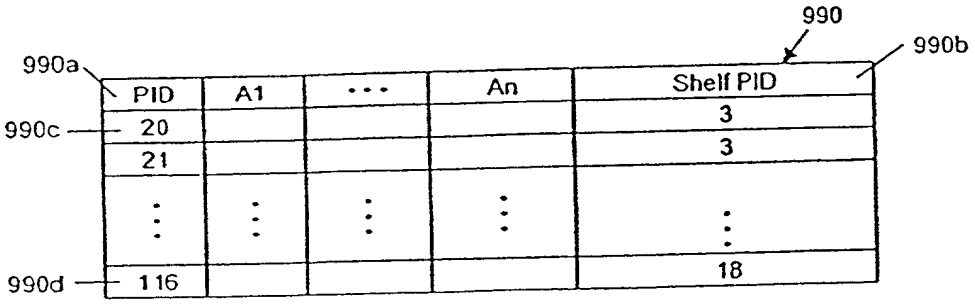


Fig. 60d

Slot Table



Sent By: Equipe Communications; 781 795 2031; Oct-9-00 6:54PM; Page 6

t By: Equipe Communications; 781 795 2031; Oct-9-00 ( )4PM; Page 7/16

CARD TABLE

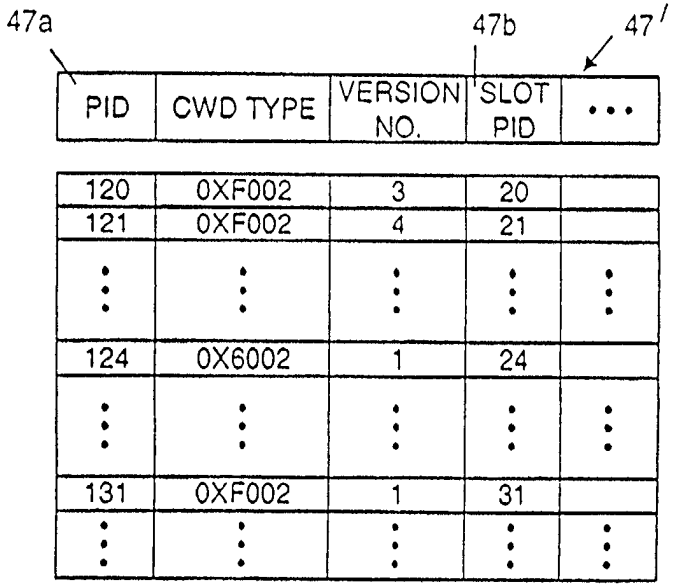


FIG. 60e

Page 8/16
Oct-9-00 15:PM;
781 795 2031;
nt By: Equipe Communications;

PORT TABLE

49a 49b 49'

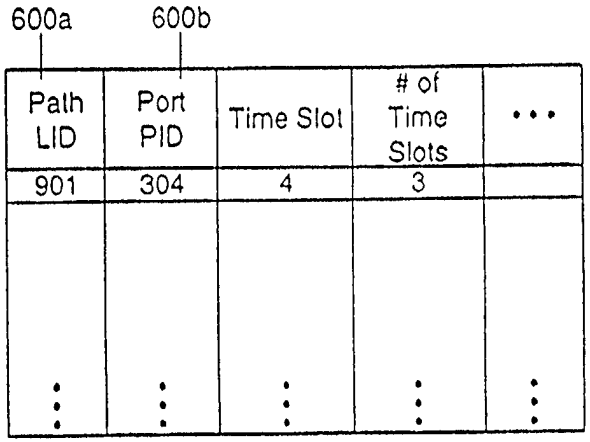
PID	PORT TYPE	VERSION NO.	CARD PID	...
300	00620	1	20	
301	00620	1	20	
302	00620	1	20	
303	00620	1	20	
304	00820	1	20	
⋮	⋮	⋮	⋮	⋮
400	OO620	1	39	
⋮	⋮	⋮	⋮	⋮

FIG. 60f

Page 9/16
Oct-9-00 3:5PM;
781 795 2031;
nt By: Equipe Communications;

FIG. 60g

SONET Path Table 600



Page 10/18
Oct-9-00 3SPM;
781 795 2031;
nt By: Equipe Communications;

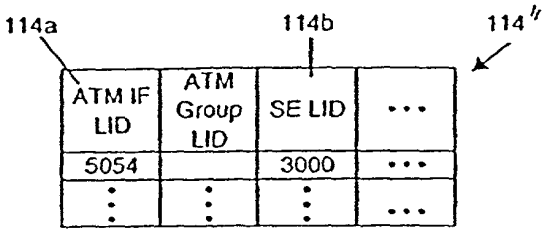
FIG. 60h

Service EndPoint Table 76''

76a SE LID	Q #	76c FC PID	FC Slice PID	76d FC Time Slot	76e Path LID	76b ...
3000					901	
⋮	⋮	⋮	⋮	⋮	⋮	⋮

Fig. 60i

ATM IF Table



Sent By: Equipe Communications; 781 795 2031; Oct-9-03 6:55PM; Page 11/16

Fig. 60j

Virtual ATM IF Table

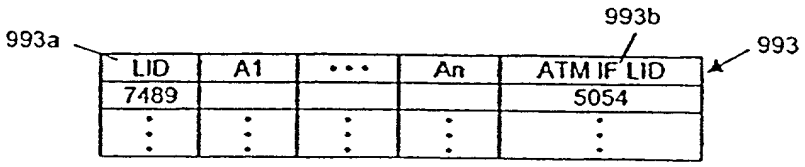


Fig. 60k

Virtual Connection Table

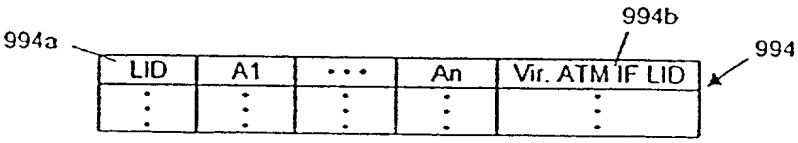


Fig. 60L

Virtual Link Table

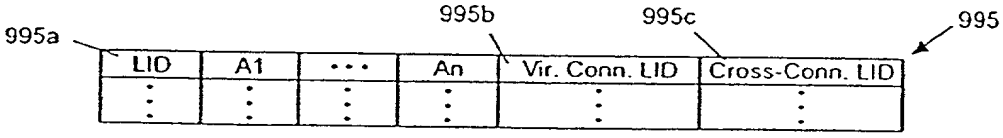
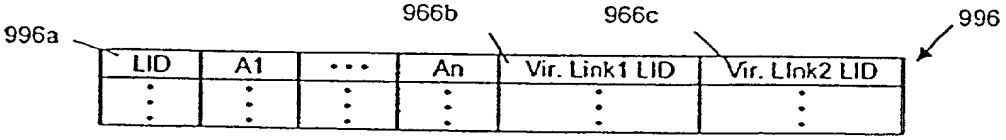


Fig. 60m

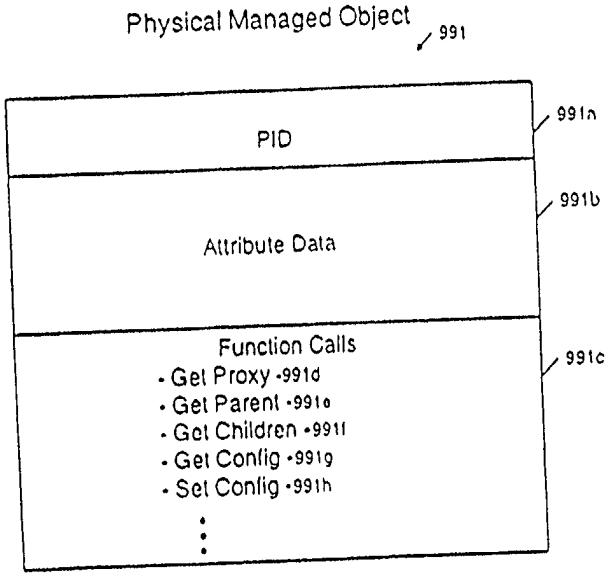
Cross-Connect Table



Sent By: Equipe Communications; 781 795 2031; Oct-9-00 6:55PM; Page 12/16

Page 14/16
Oct-9-00
81 795 2031;
By: Equipe Communications;

Fig. 61a



Tech Pub. # 1999-0004

Fig. 61b

Oct-9-00 [illegible] 3PM; 781 795 2031; t By: Equipe Communications;

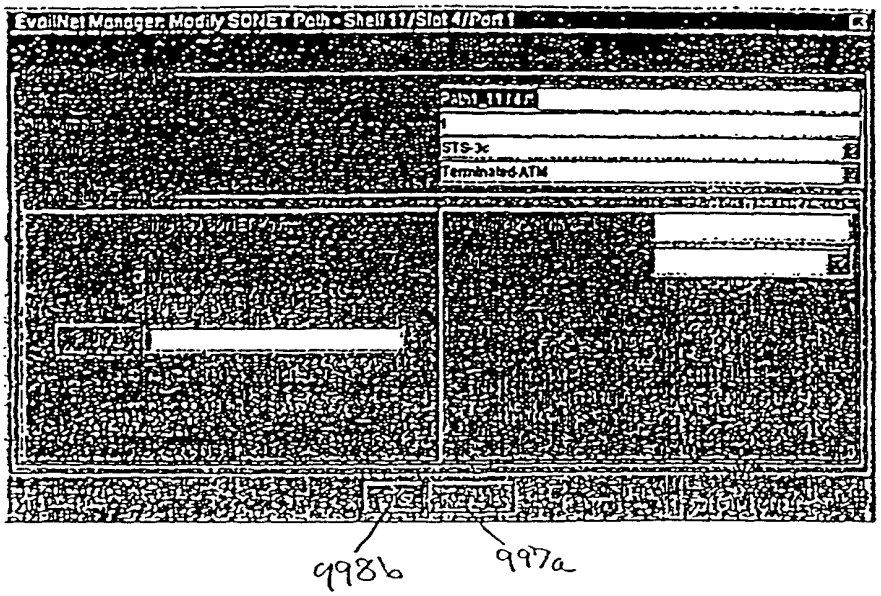
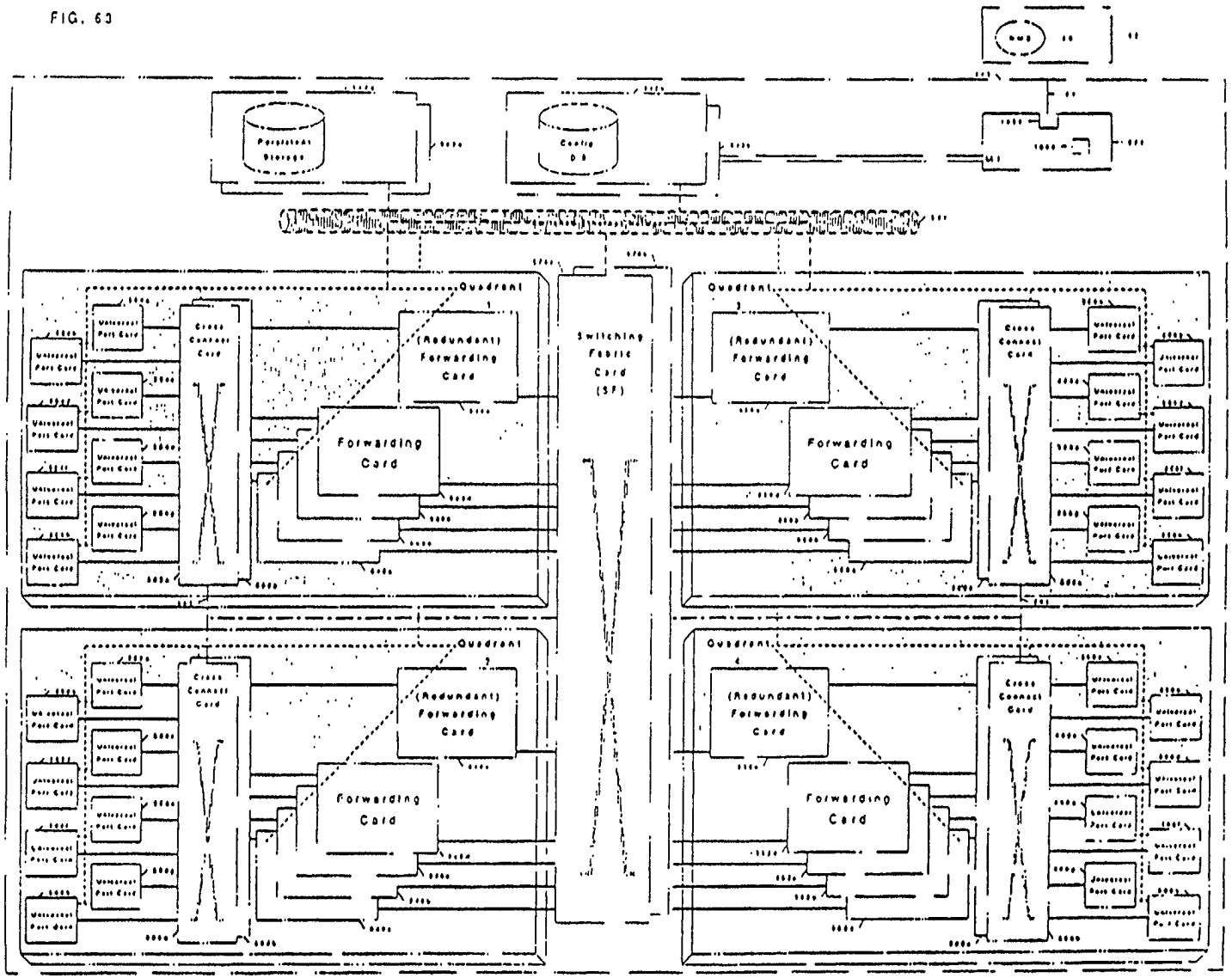


Fig. 62

10-09-00 : 05:26PM :

FIG. 63


Switching Fabric Card (SF)
Quadrant 1
Quadrant 2
Quadrant 3
Quadrant 4
(Redundant) Forwarding Card
Forwarding Card
Cross Connect Card
Universal Port Card

Sent By: Equipe Communications; 781 795 2031; Nov-3- 5:18PM; Page 4/4

Fig. 64

Administration Managed Device Table

1014

1014a LID	Host Address	Port Address	Retry	Timeout	Admin. Password	Prov. Password	Viewer Password	1014e Physical ID	1014f Physical ID
9046	192.168.9.202	1521			team 1	team 2	team 3		
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

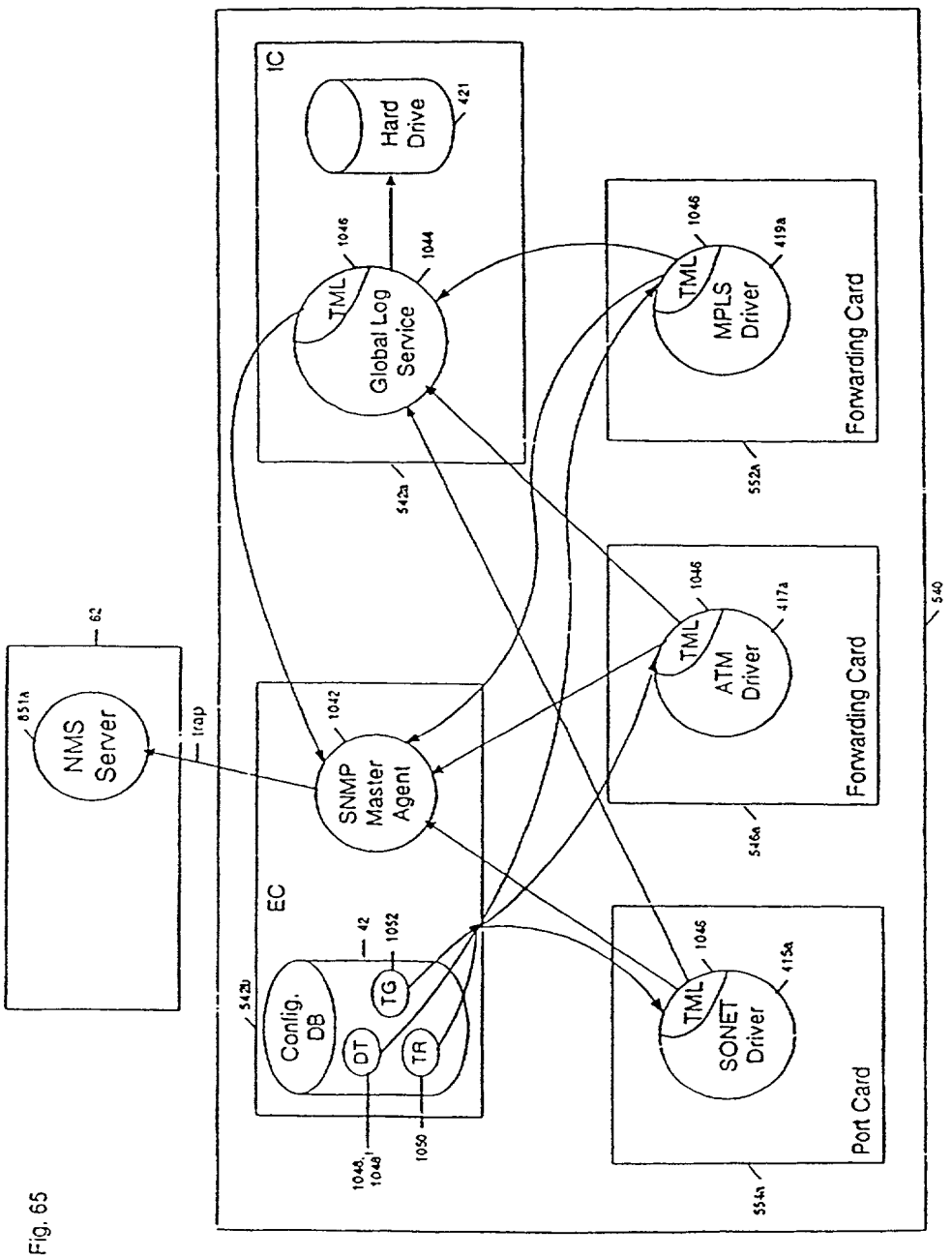

62
851a
NMS Server
trap
540
IC
Hard Drive
421
TML
1046
Global Log Service
1044
542a
EC
SNMP Master Agent
1042
42
1052
Config. DB
542b
DT
TG
TR
1050
1048, 1048'
TML
1046
MPLS Driver
419a
Forwarding Card
552a
TML
1046
ATM Driver
417a
Forwarding Card
546a
TML
1046
SONET Driver
415a
Port Card
554a

Fig. 65

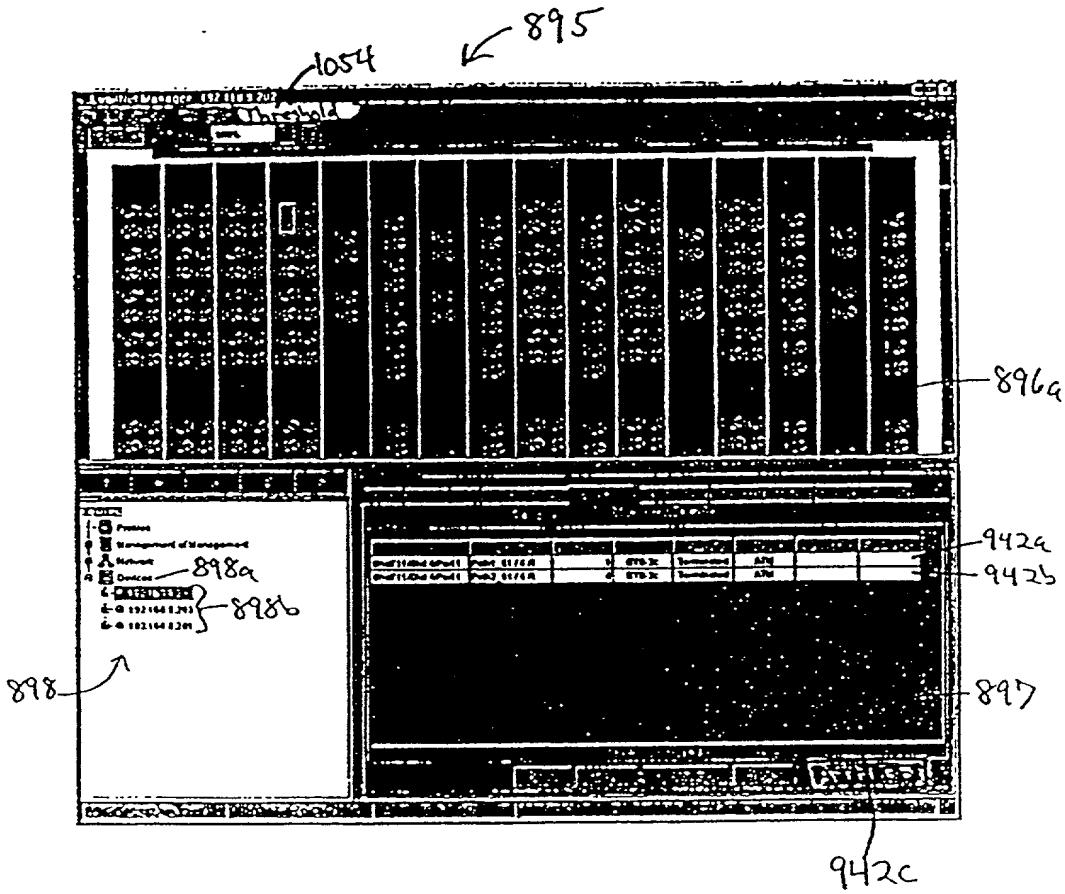


Fig. 66a

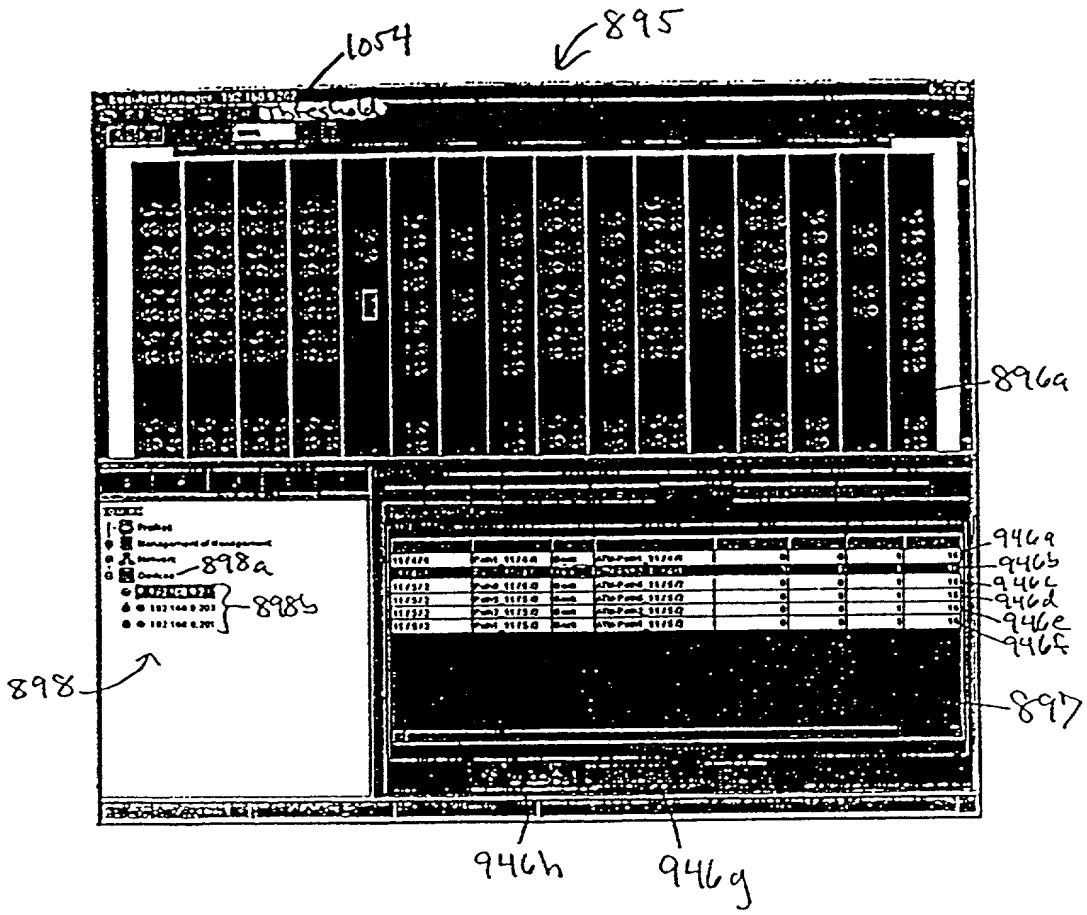

1054
895
896a
898a
898b
898
946a
946b
946c
946d
946e
946f
897
946h
946g

Fig. 66b

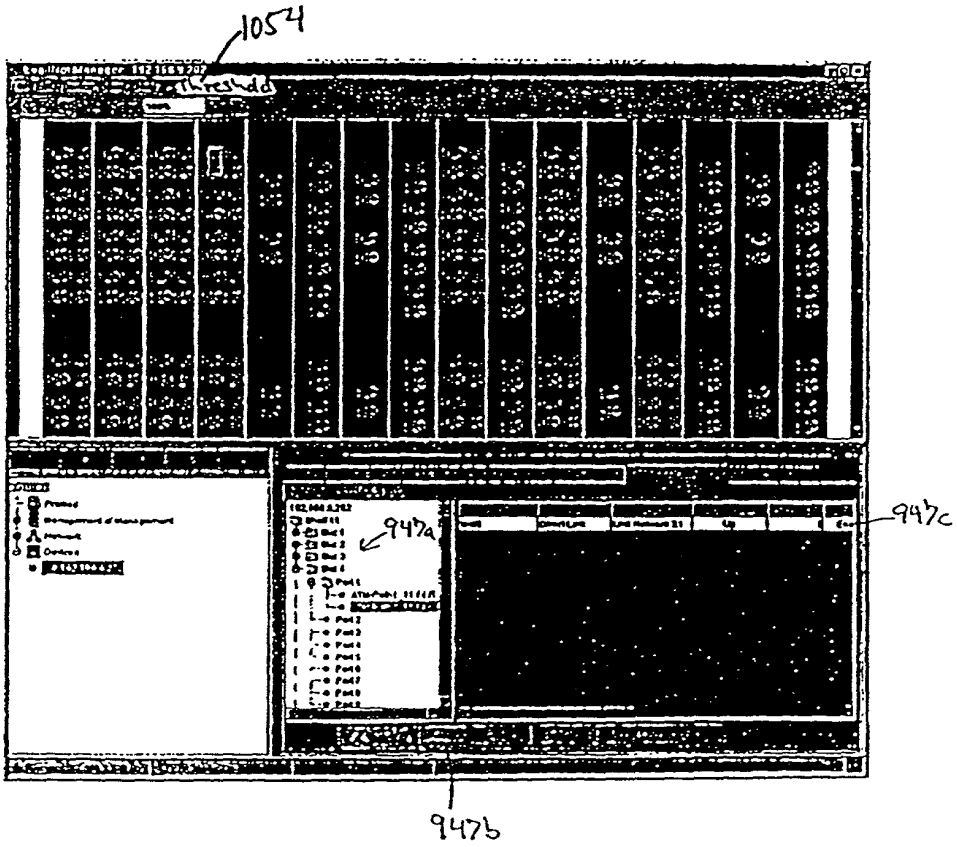


Fig. 66c

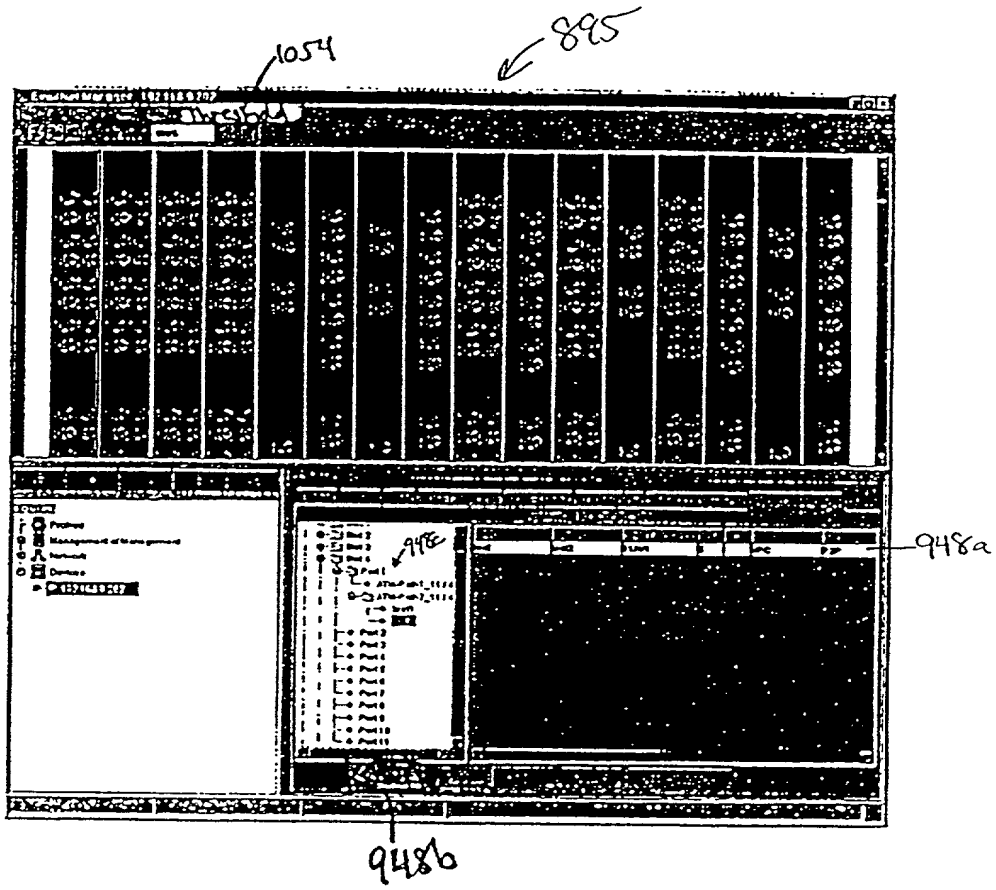


Fig. 66d

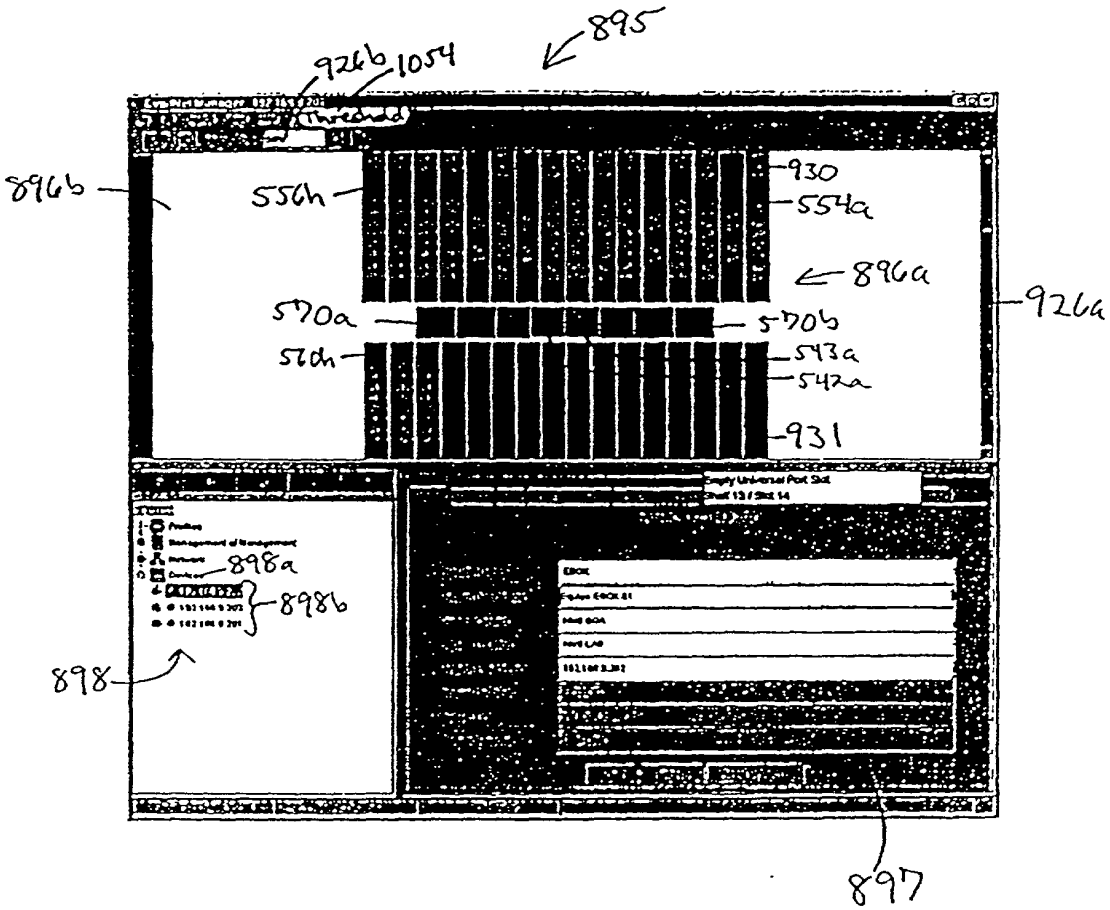


Fig. 66

Doc#1 Pg: 0 of 0 Trn: 0 Rec: 0

Fig. 67

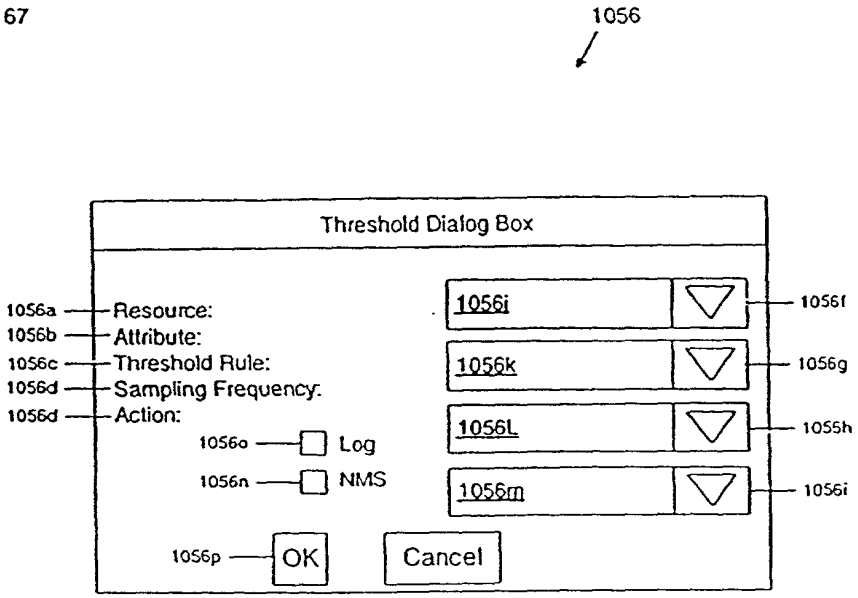

1056
Threshold Dialog Box
1056a
Resource:
1056b
Attribute:
1056c
Threshold Rule:
1056d
Sampling Frequency:
1056d
Action:
1056o
Log
1056n
NMS
1056p
OK
Cancel
1056i
1056k
1056L
1056m
1056f
1056g
1055h
1056i

Fig. 68

Dynamic Threshold Table

1048

	1048a Resource ID	1048c Attribute	1048d Sampling Freq.	1048e Action	1048f Rule
1048g	901	Unavailable Seconds (Path end)	15 min	Log	if attribute > 10
	901	Path Errors (path end)	15 min	trap	if attribute <5 or >10
	901	Path Errors (path end)	5 min	Log & trap	if attribute <5 or >10
	⋮	⋮	⋮	⋮	⋮
	5054	failed call attempts	10 min	trap	if attribute >8 between 8:00am-7:00pm or >2 between 7:00pm-8:00am
1048h	5054	hcs errors	12 min	trap	if attribute >13
	⋮	⋮	⋮	⋮	⋮
	7312	Rx Traffic	1 hour	trap	if attribute <4
	7312	Tx Traffic	1 hour	trap	if attribute =Ø
		⋮	⋮	⋮	⋮

Sent By: Equipe Communications; 781 795 2031; Nov-20-00 10:31AM; Page 10/14

Fig. 69a

Dynamic Threshold Table

1048

1048a Thr. Group LID	1048b Resource	1048c Attribute	1048d Sampling Freq.	1048e Action	1048f Rule
8312	SONET Path	Unavailable Seconds (Path end)	15 min	Log	if attribute > 10
8312	SONET Path	Path Errors (Path end)	15 min	trap	if attribute <5 or >10
8312	SONET Path	Path Errors (far end)	5 min	Log & trap	if attribute <5 or >10
⋮	⋮	⋮	⋮	⋮	⋮
8433	ATM If	failed call attempts	10 min	trap	if attribute >8 between 8:00am-7:00pm or >2 between 7:00pm-8:00am
8433	ATM If	hcs errors	12 min	trap	if attribute >13
⋮	⋮	⋮	⋮	⋮	⋮
8542	Virtual Conn.	Rx Traffic	1 hour	trap	if attribute <4
8542	Virtual Conn.	Tx Traffic	1 hour	trap	if attribute =Ø
	⋮	⋮	⋮	⋮	⋮

Fig. 69b

1052

Threshold Group Table

1052a Resource ID	1052b Threshold Group LID
901	8312
902	8313
903	8312
⋮	⋮
5054	8433
⋮	⋮
7312	8542

"EXPRESS MAIL" OFFICE OF DEPOSIT

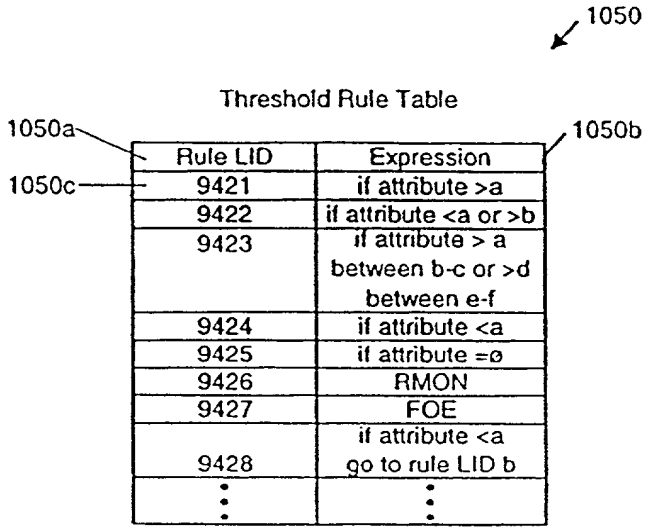
Fig. 70a

Dynamic Threshold Table

1048'

	1048a" Thr. Group LID	1048b" Resource	1048c" Attribute	1048d" Sampling Freq.	1048e" Action	1048f" Rule Id	1048g" Variable a	1048h" Variable b	1048i" Variable c	1048j" Variable d	1048k" Variable e	1048L" Variable f	...	1048n" Variable n
1048o"	8312	SONET Path	Unavailable Seconds (Path end)	15 min	Log	9421	10							
	8312	SONET Path	Path Errors (Path end)	15 min	Inap	9422	5	10						
	8312	SONET Path	Path Errors (far end)	5 min	Log & Inap	9422	5	10						
	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1048p"	8433	ATM If	failed call attempts	10 min	Inap	9423	8	8:00am	7:00pm	2	7:00pm	8:00am		
	8433	ATM If	hcs errors	12 min	Inap	9421	13							
	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	8542	Virtual Conn	Rx Traffic	1 hour	Inap	9424	4							
	8542	Virtual Conn	Tx Traffic	1 hour	Inap	9425								
		...	...	...	...	...	...	...	...	...	...	...	...	...

Fig. 70b


1050
Threshold Rule Table
1050a
1050b
1050c
Rule LID
Expression
9421
if attribute >a
9422
if attribute <a or >b
9423
if attribute > a between b-c or >d between e-f
9424
if attribute <a
9425
if attribute =ø
9426
RMON
9427
FOE
9428
if attribute <a go to rule LID b

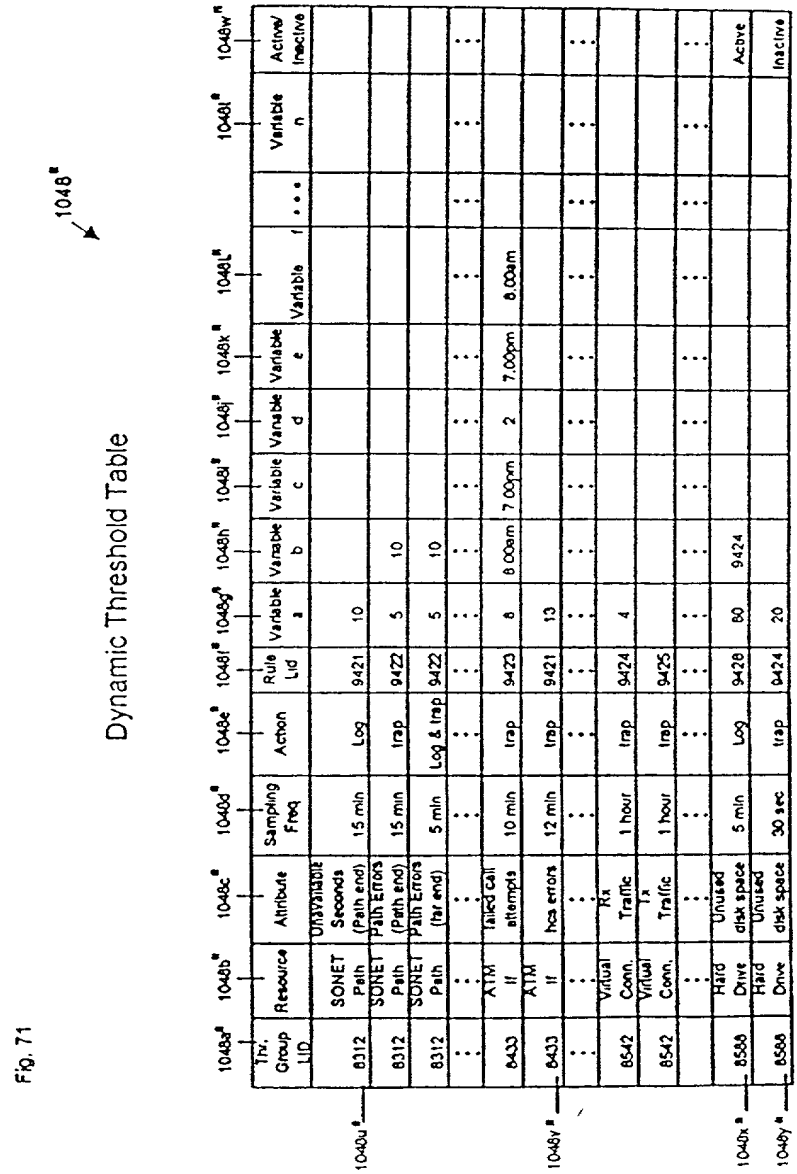

1048
Dynamic Threshold Table
1048a
1048b
1048c
1048d
1048e
1048f
1048g
1048h
1048i
1048j
1048k
1048L
1048l
1048w
Thr. Group LID
Resource
Attribute
Sampling Freq
Action
Rule Lid
Variable a
Variable b
Variable c
Variable d
Variable e
Variable f
• • •
Variable n
Active/ Inactive
1040u
8312
SONET Path
Unavailable Seconds (Path end)
15 min
Log
9421
10
SONET Path
Path Errors (Path end)
15 min
trap
9422
5
10
SONET Path
Path Errors (far end)
5 min
Log & trap
9422
5
10
1046r
8433
ATM II
failed call attempts
10 min
trap
9423
6
8:00am
7:00pm
2
7:00pm
8:00am
8433
ATM II
hcs errors
12 min
trap
9421
13
8542
Virtual Conn.
Rx Traffic
1 hour
trap
9424
4
8542
Virtual Conn.
Tx Traffic
1 hour
trap
9425
1040s
8588
Hard Drive
Unused disk space
5 min
Log
9428
80
9424
Active
1048y
8588
Hard Drive
Unused disk space
30 sec
trap
9424
20
Inactive

Fig. 71

TOSTHO" DTE3E360

Fig. 72a

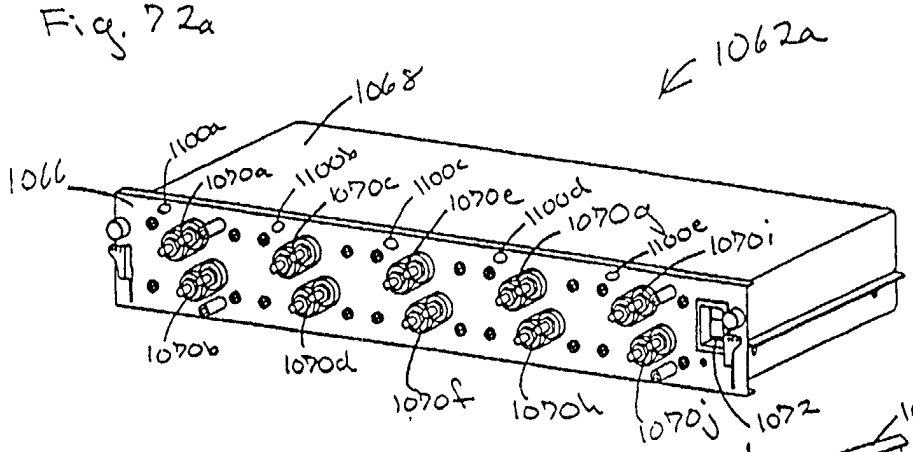


Fig. 72b

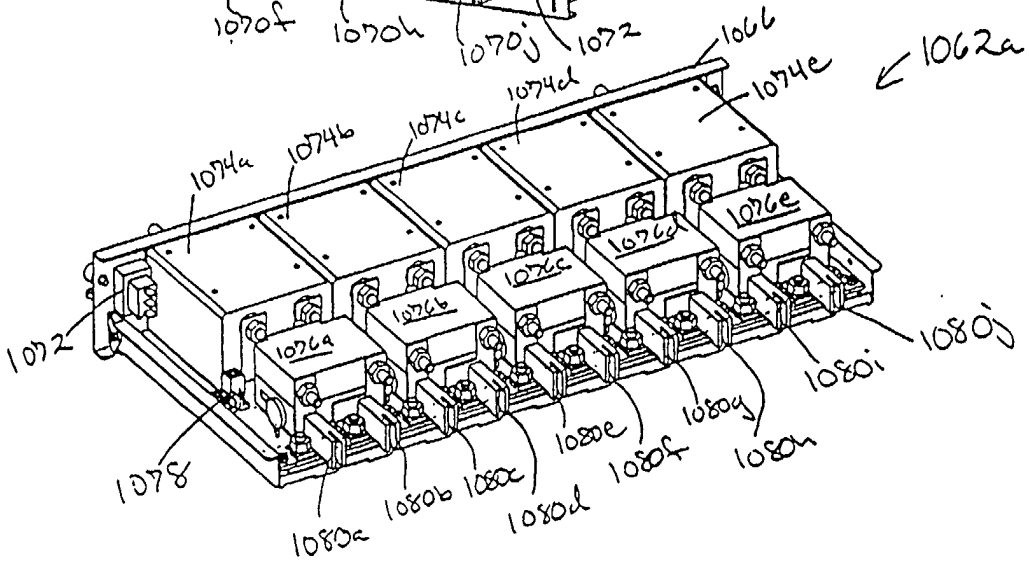


Fig. 73a

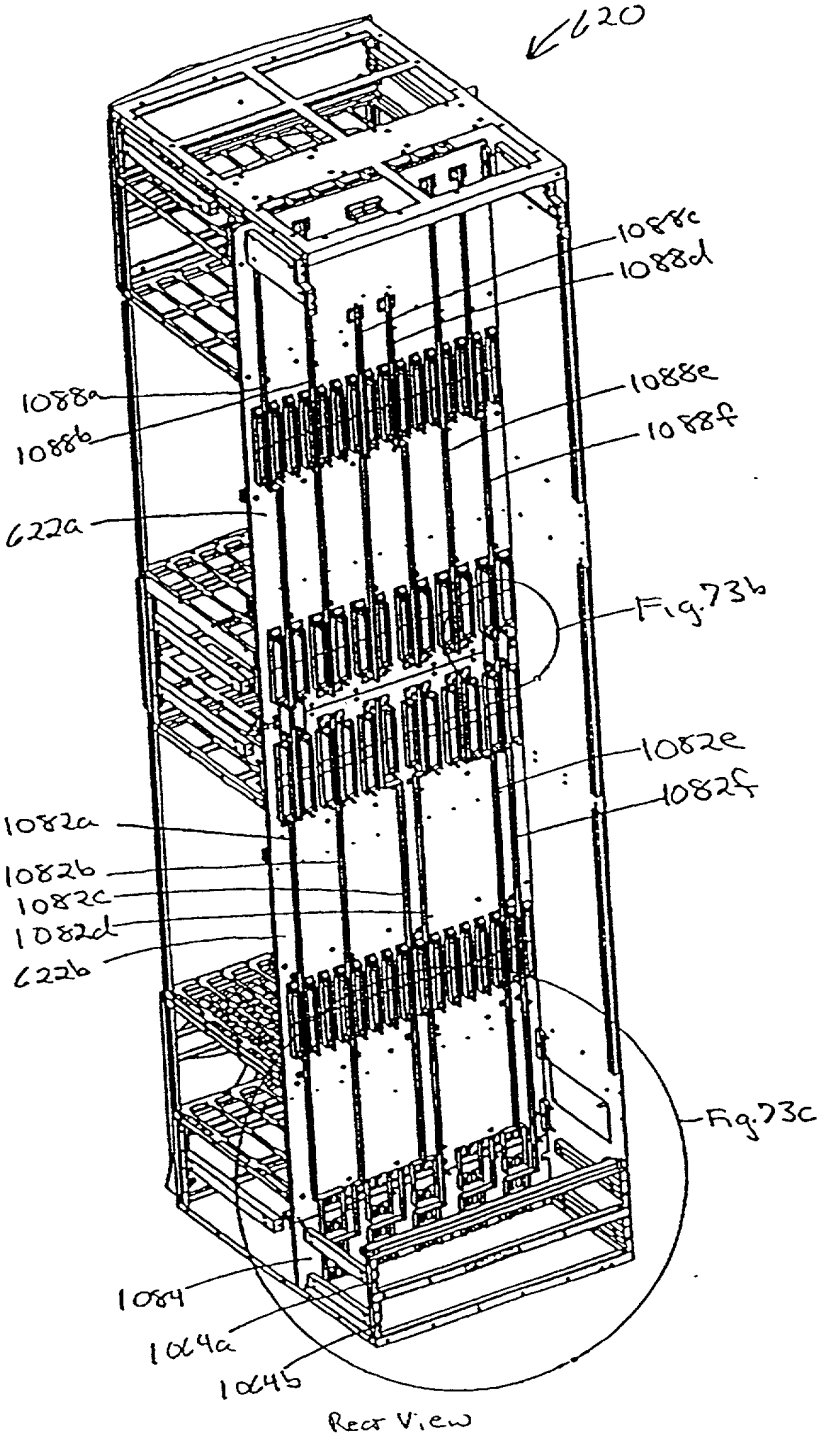

620
1088c
1088d
1088a
1088b
1088e
1088f
622a
Fig. 73b
1082e
1082f
1082a
1082b
1082c
1082d
622b
Fig. 73c
1084
1084a
1084b
Rear View

Fig. 73b

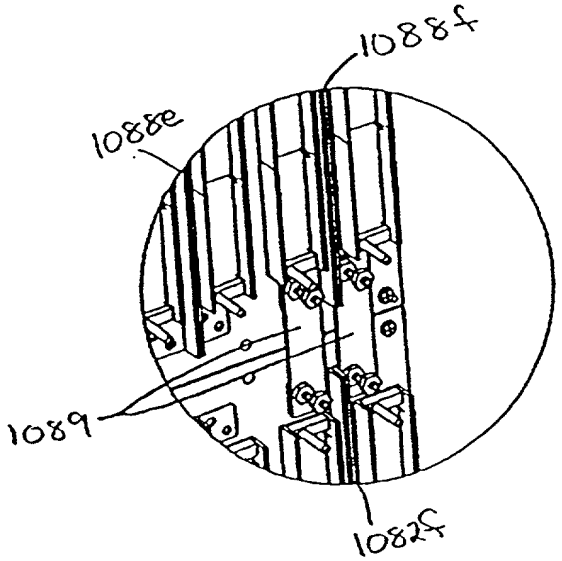
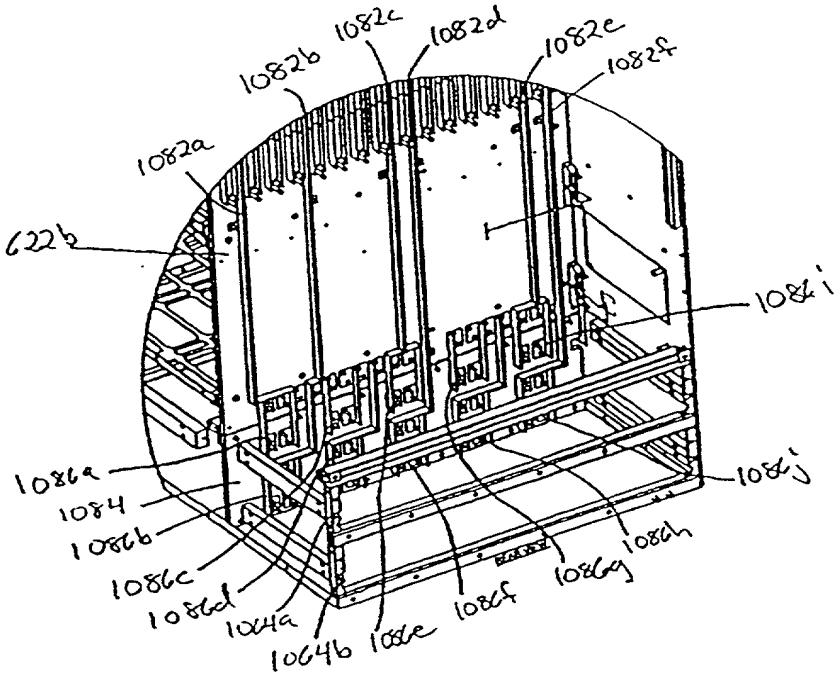


Fig. 73c


10826
10822
10824
10824
10824
10822
10824
10822
10824
10824
10824

TOSTMD "0E3E360

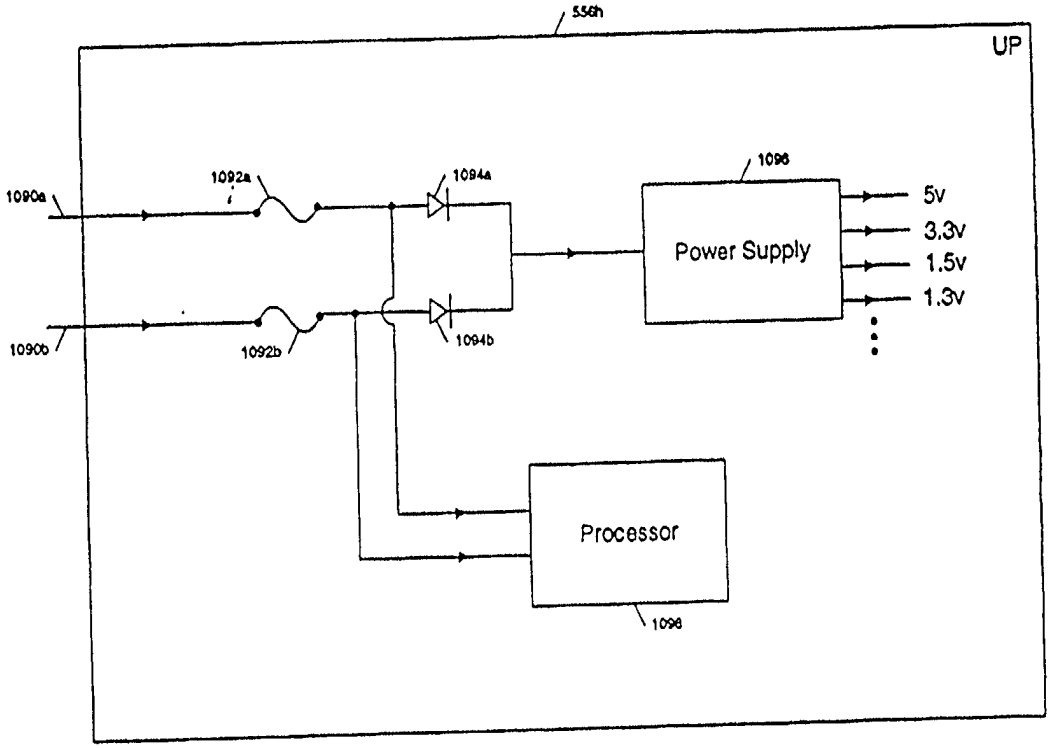


Fig. 74

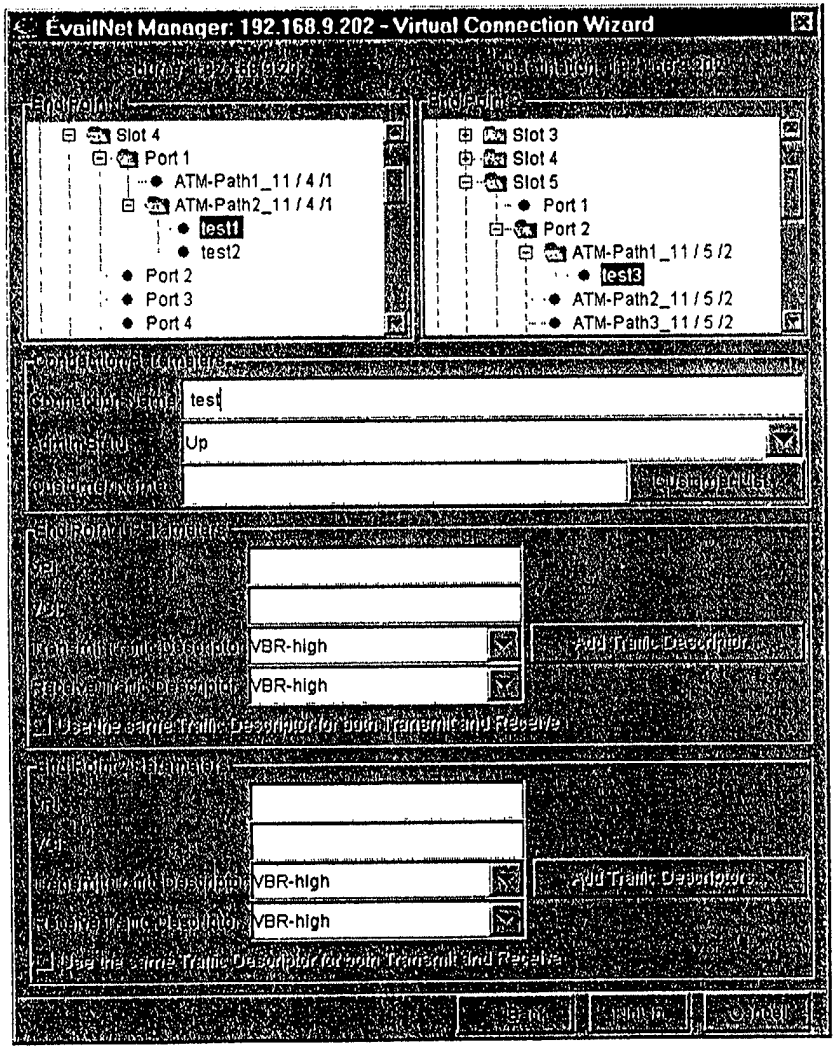

EvailNet Manager: 192.168.9.202 - Virtual Connection Wizard
Slot 4
Port 1
ATM-Path1_11 / 4 /1
ATM-Path2_11 / 4 /1
test1
test2
Port 2
Port 3
Port 4
Slot 3
Slot 4
Slot 5
Port 1
Port 2
ATM-Path1_11 / 5 /2
test3
ATM-Path2_11 / 5 /2
ATM-Path3_11 / 5 /2
test
Up
VBR-high
VBR-high
Add Traffic Descriptor
Use the same Traffic Descriptor for both Transmit and Receive
VBR-high
VBR-high
Add Traffic Descriptor
Use the same Traffic Descriptor for both Transmit and Receive

Fig. 75

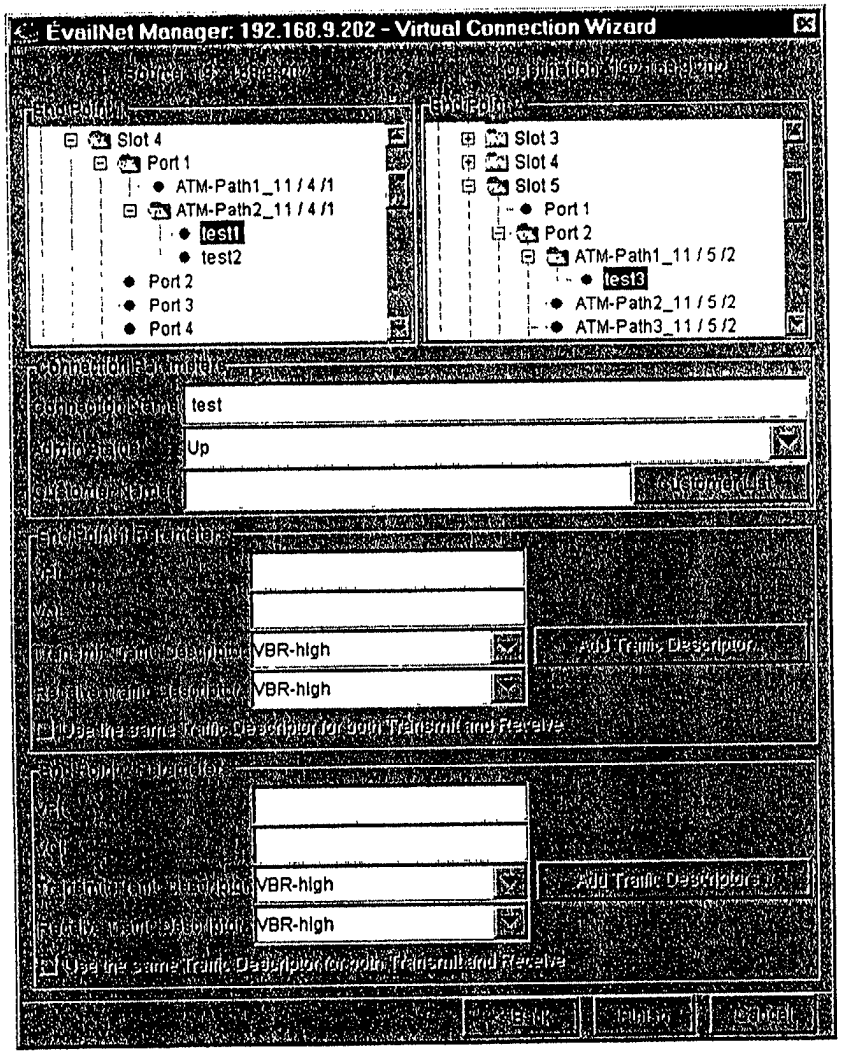

EvailNet Manager: 192.168.9.202 - Virtual Connection Wizard
Slot 4
Port 1
ATM-Path1_11 / 4 /1
ATM-Path2_11 / 4 /1
test1
test2
Port 2
Port 3
Port 4
Slot 3
Slot 4
Slot 5
Port 1
Port 2
ATM-Path1_11 / 5 /2
test3
ATM-Path2_11 / 5 /2
ATM-Path3_11 / 5 /2
test
Up
VBR-high
VBR-high
Add Traffic Descriptor...
VBR-high
VBR-high
Add Traffic Descriptor...
Cancel

Fig. 76

Fig. 77

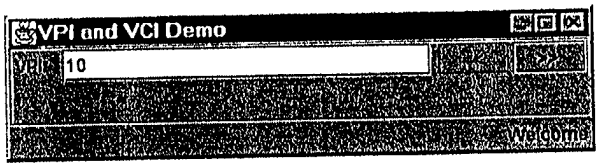
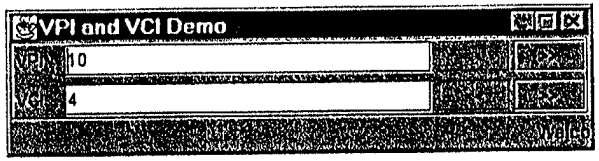


Fig. 78



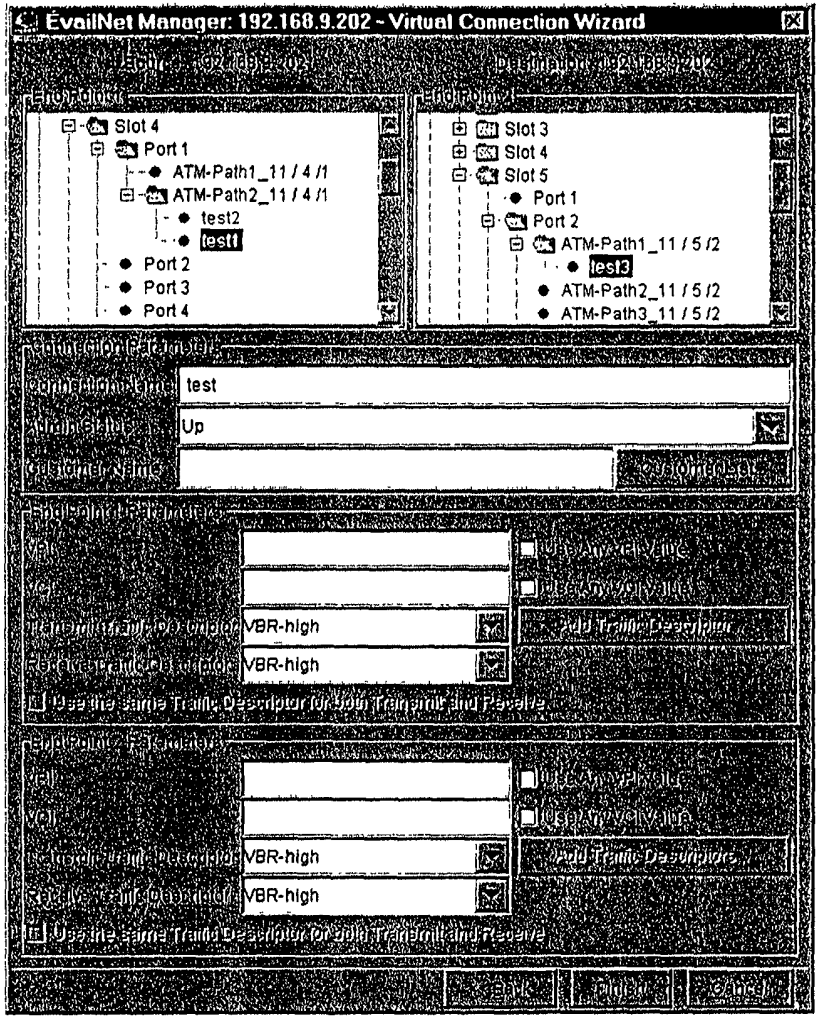
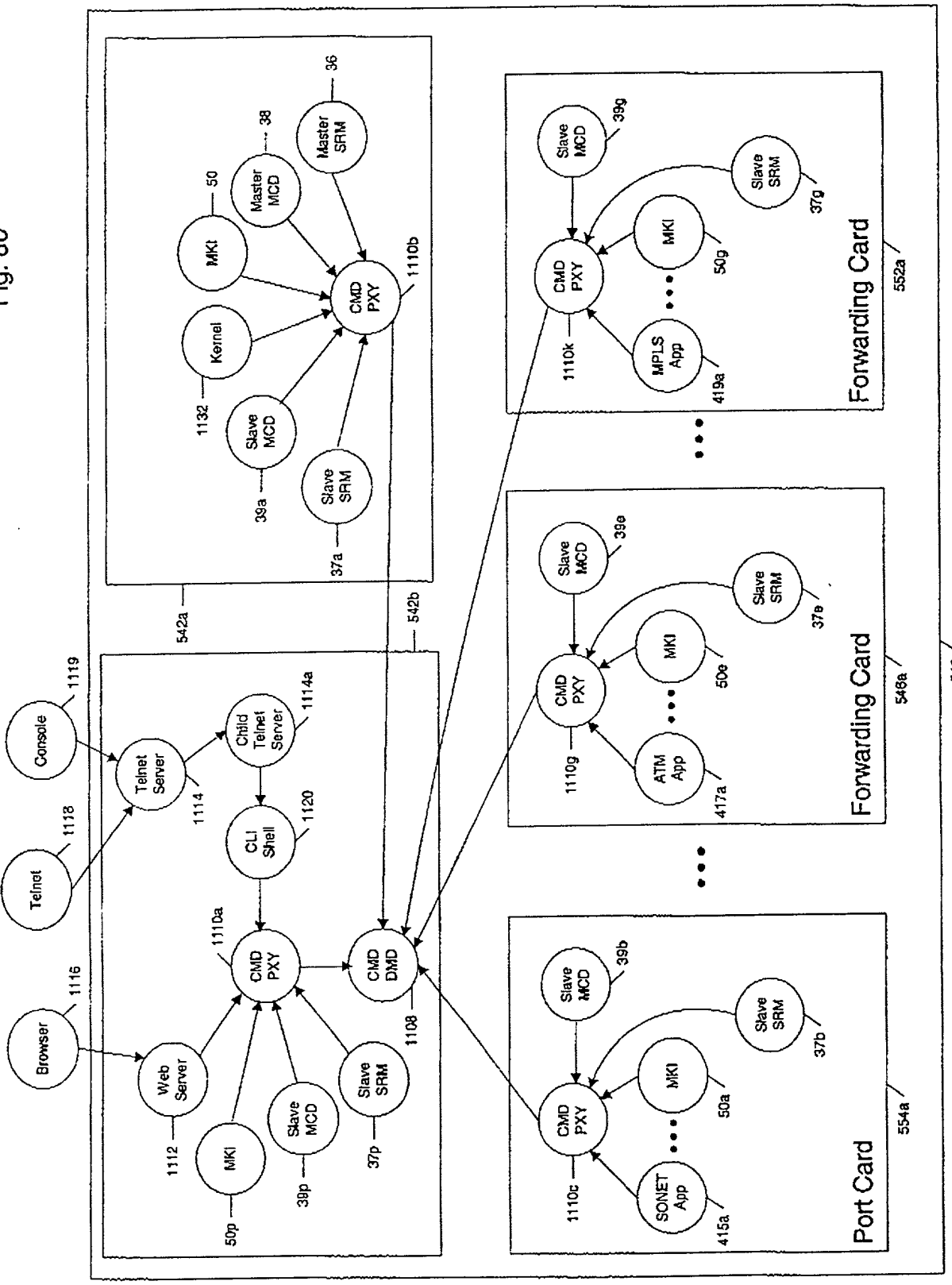

EvailNet Manager: 192.168.9.202 - Virtual Connection Wizard
Slot 4
Port 1
ATM-Path1_11 / 4 /1
ATM-Path2_11 / 4 /1
test2
test1
Port 2
Port 3
Port 4
Slot 3
Slot 4
Slot 5
Port 1
Port 2
ATM-Path1_11 / 5 /2
test3
ATM-Path2_11 / 5 /2
ATM-Path3_11 / 5 /2
test
Up
VBR-high
VBR-high
VBR-high
VBR-high

Fig. 79

Fig. 80


Console
1119
Telnet
1118
Browser
1116
Telnet Server
1114
Child Telnet Server
1114a
CLI Shell
1120
Web Server
1112
MKI
50p
Slave MCD
39p
Slave SRM
37p
CMD PXY
1110a
CMD DMD
1108
542a
542b
MKI
50
Master MCD
38
Master SRM
36
Kernel
1132
Slave MCD
39a
Slave SRM
37a
CMD PXY
1110b
540
Forwarding Card
552a
Slave MCD
39g
Slave SRM
37g
MKI
50g
CMD PXY
1110k
MPLS App
419a
Forwarding Card
548a
Slave MCD
39e
Slave SRM
37e
MKI
50e
CMD PXY
1110g
ATM App
417a
Port Card
554a
Slave MCD
39b
Slave SRM
37b
MKI
50a
CMD PXY
1110c
SONET App
415a

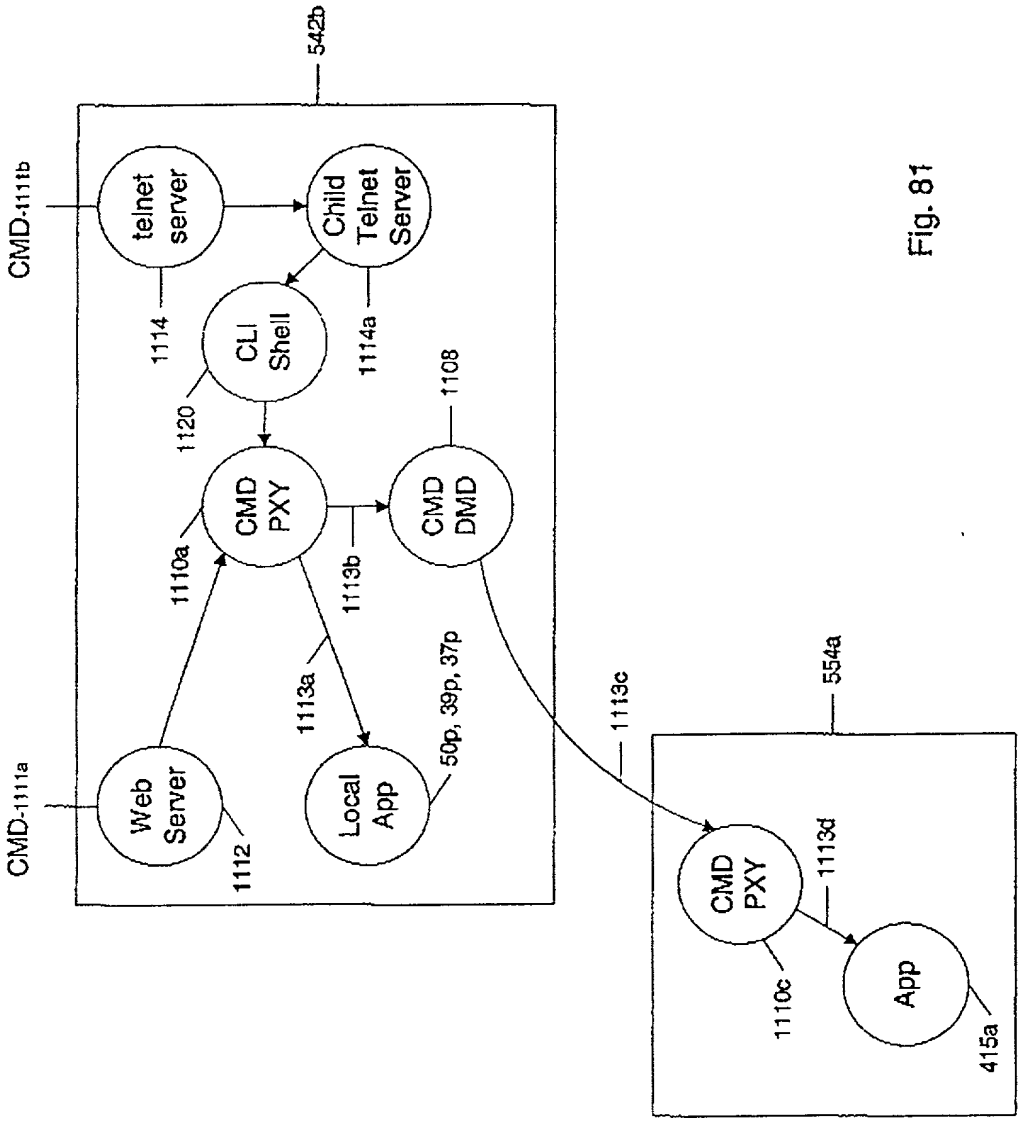

542b
CMD-1111b
telnet server
Child Telnet Server
1114
CLI Shell
1114a
1120
1108
CMD PXY
CMD DMD
1110a
1113b
1113a
50p, 39p, 37p
1113c
554a
CMD-1111a
Web Server
1112
Local App
CMD PXY
1113d
1110c
App
415a

Fig. 81

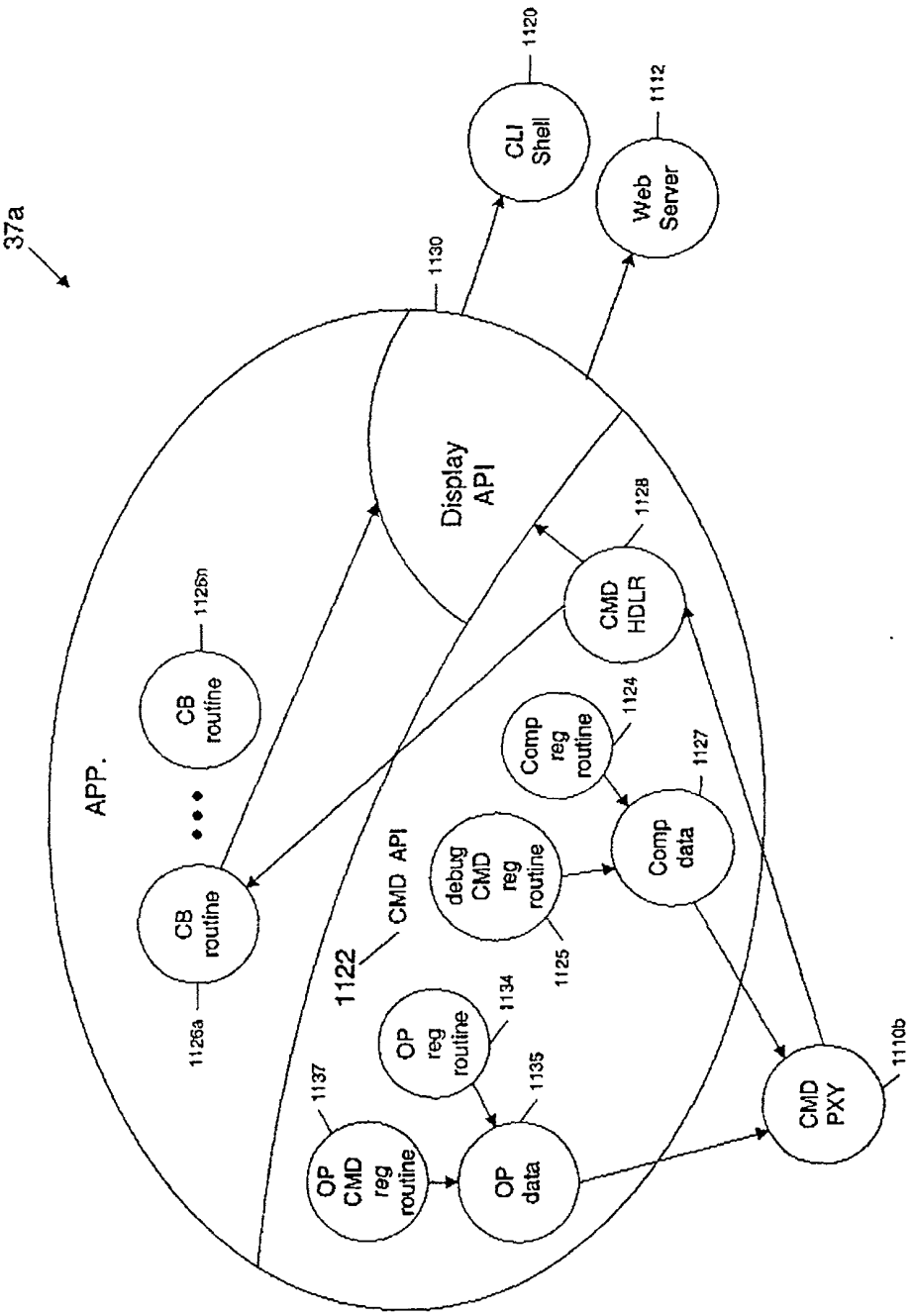

37a
APP.
CB routine
1126n
CB routine
1126a
CMD API
1122
Display API
1130
CLI Shell
1120
Web Server
1112
CMD HDLR
1128
Comp reg routine
1124
Comp data
1127
debug CMD reg routine
1125
OP reg routine
1134
OP CMD reg routine
1137
OP data
1135
CMD PXY
1110b

Fig. 82

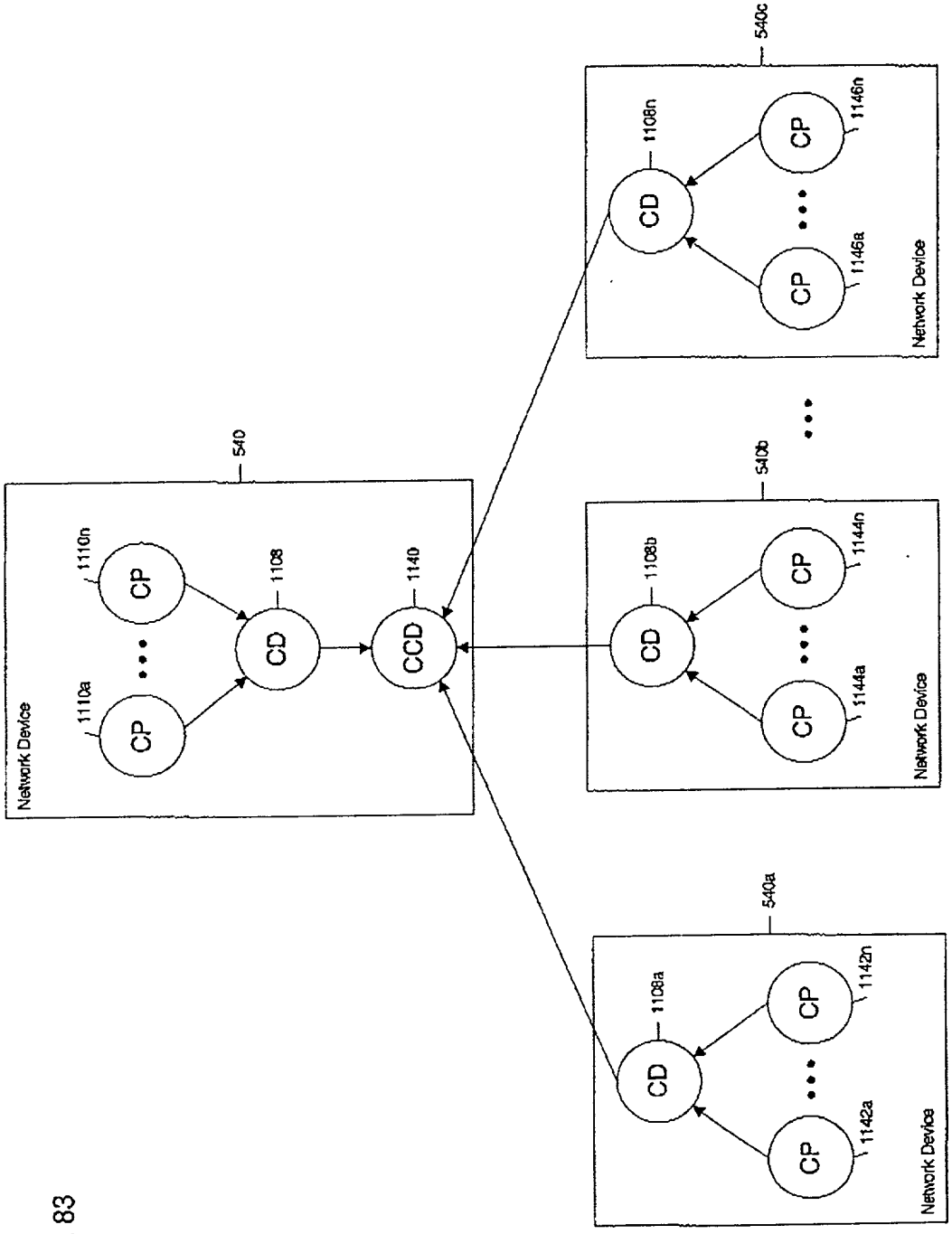

540
Network Device
1110n
CP
1110a
CP
1108
CD
1140
CCD
540c
1108n
CD
1146n
CP
1146a
CP
Network Device
540b
1108b
CD
1144n
CP
1144a
CP
Network Device
540a
1108a
CD
1142n
CP
1142a
CP
Network Device

Fig. 83

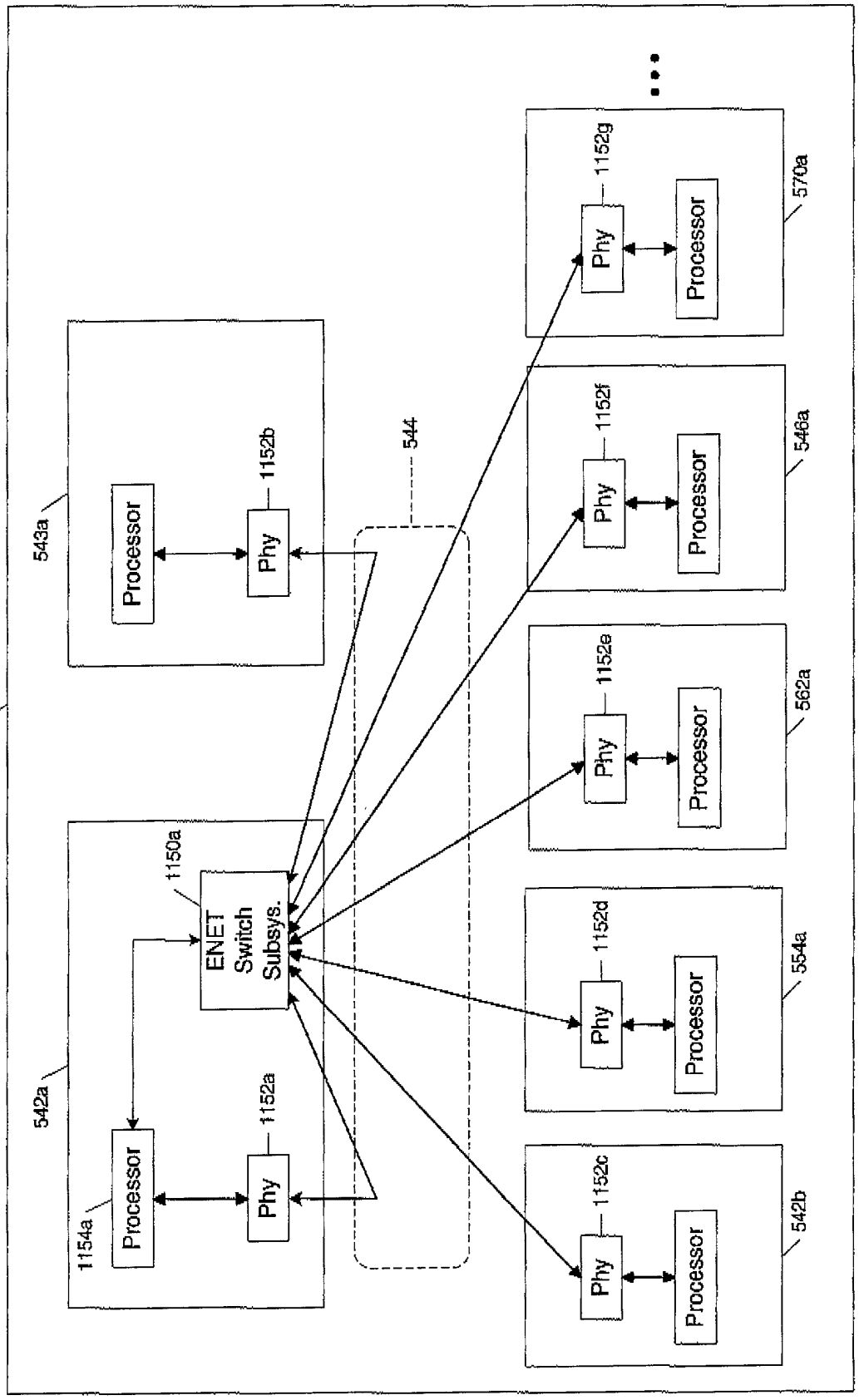
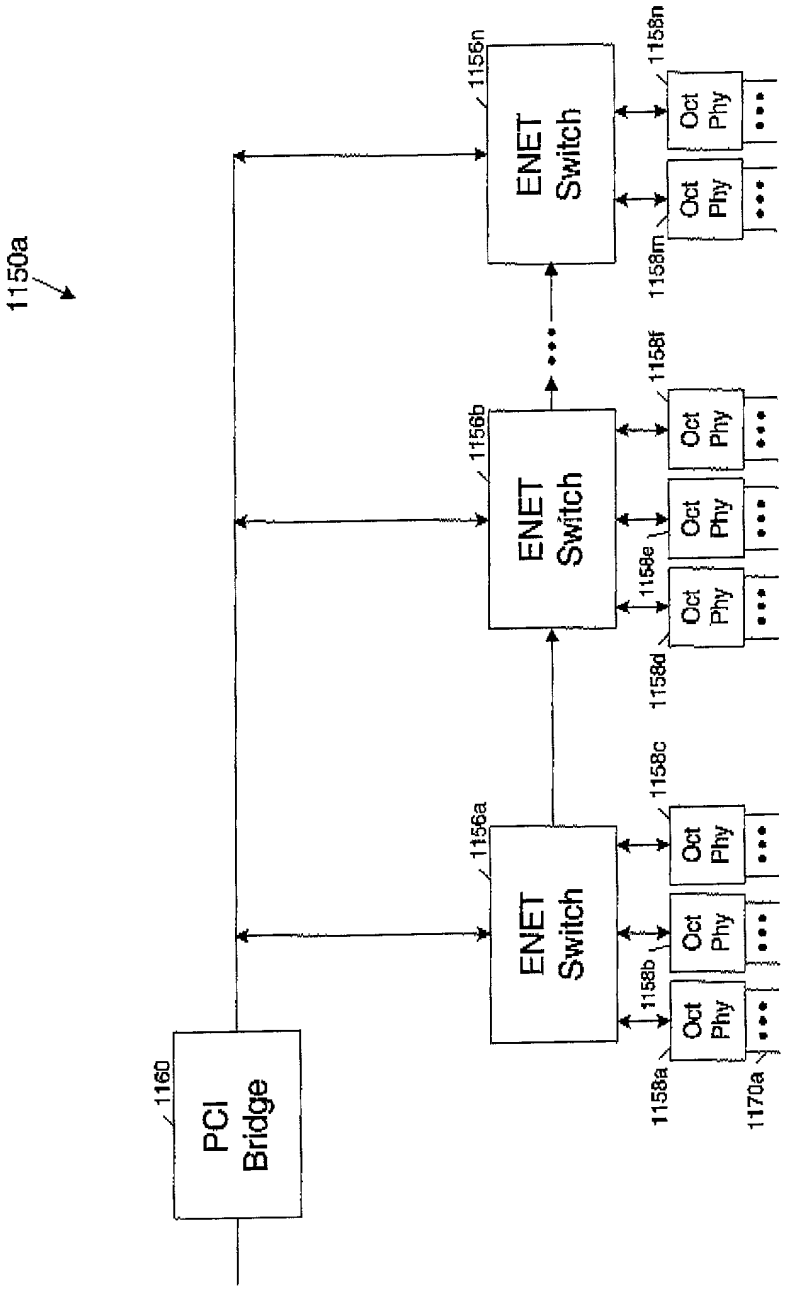

540
542a
1154a
Processor
Phy
1152a
ENET Switch Subsys.
1150a
543a
Processor
Phy
1152b
544
542b
Phy
1152c
Processor
554a
Phy
1152d
Processor
562a
Phy
1152e
Processor
546a
Phy
1152f
Processor
570a
Phy
1152g
Processor

Fig. 84

LUCENT - DRAFT

Fig. 85



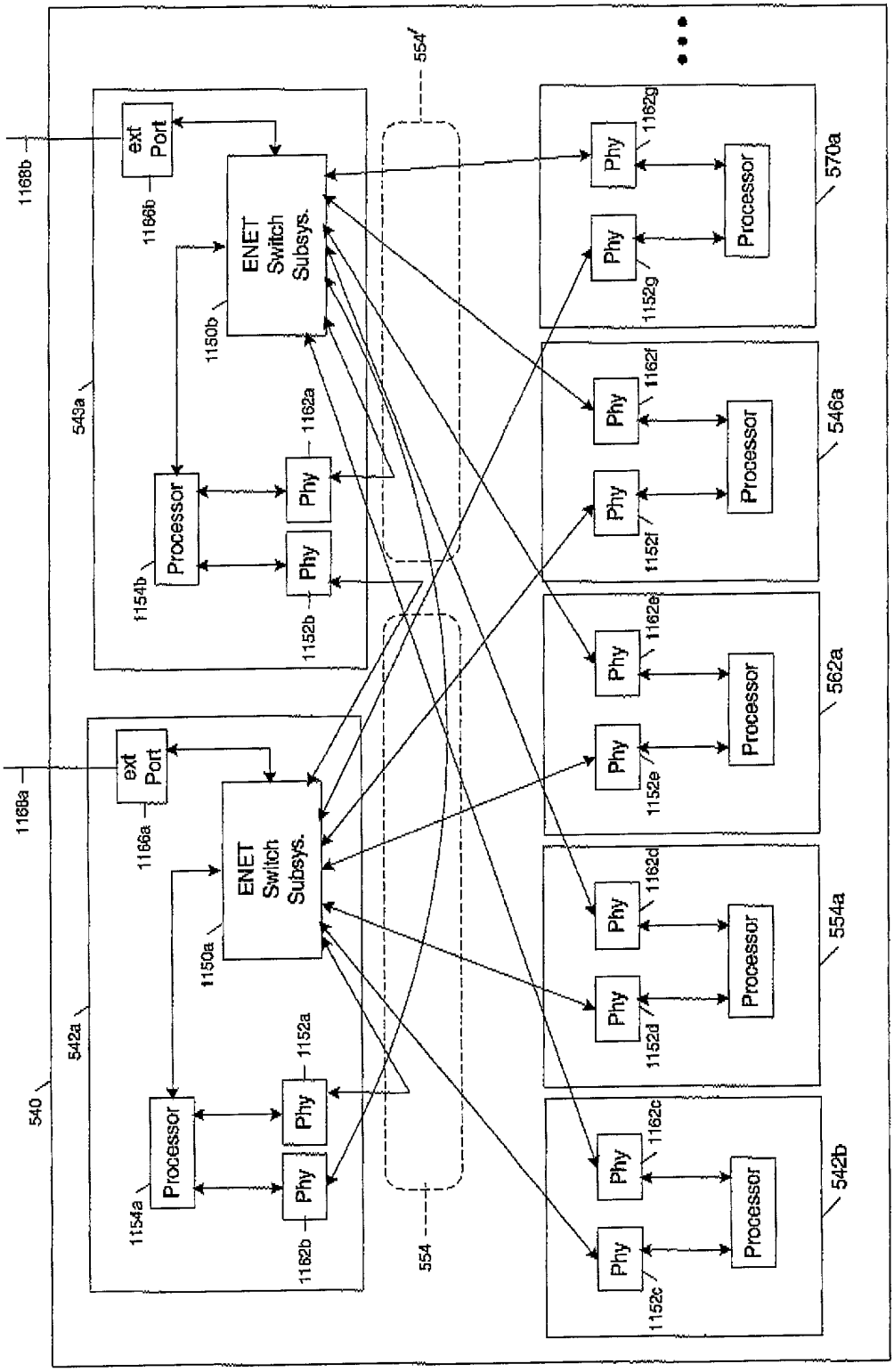

540
542a
543a
554
554'
562a
570a
546a
554a
542b
1168a
1168b
ext Port
1166a
1166b
ENET Switch Subsys.
1150a
1150b
Processor
1154a
1154b
Phy
1152a
1152b
1152c
1152d
1152e
1152f
1152g
1162a
1162b
1162c
1162d
1162e
1162f
1162g

Fig. 86

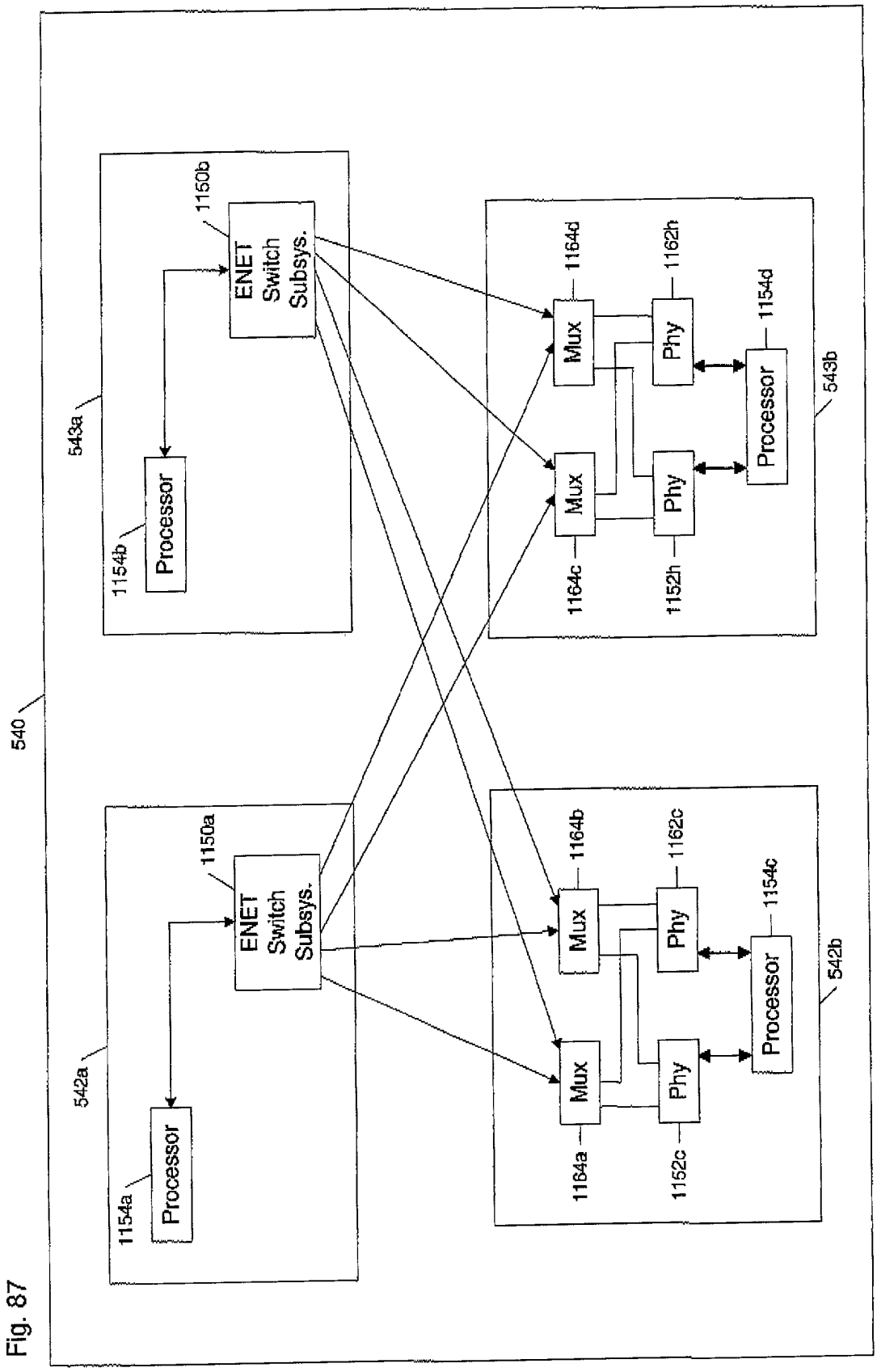

540
543a
1150b
ENET Switch Subsys.
1154b
Processor
543b
1164d
Mux
1162h
Phy
1154d
Processor
1164c
Mux
1152h
Phy
542a
1150a
ENET Switch Subsys.
1154a
Processor
542b
1164b
Mux
1162c
Phy
1154c
Processor
1164a
Mux
1152c
Phy

Fig. 87